UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 27 2011

DEPUTY ADMINISTRATOR

The Honorable Fred Upton
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Thank you for your letter of May 9, 2011 to Administrator Lisa Jackson requesting information relating to recent and pending new EPA rules affecting the electric power sector. I am pleased to respond on Administrator Jackson's behalf.

As you know, the EPA is in the process of developing a series of rules – under the Clean Air Act (CAA), the Clean Water Act (CWA), and the Resource Conservation and Recovery Act (RCRA) – to protect public health and the environment from pollution produced by power plants. On July 6, 2011, the EPA promulgated the Cross-State Air Pollution Rule to protect public health and help States meet air quality standards. Three other rules have been proposed, but not yet finalized, including the long-overdue Mercury and Air Toxics Standards for power plants under section 112 of the CAA, standards for power plant cooling water intake systems under section 316(b) of the CWA, and standards for disposal of coal combustion residuals under RCRA. In addition, the EPA has committed to proposing New Source Performance Standards for greenhouse gas emissions from power plants by September 30 of this year.

Collectively, these rules will achieve major public health and environmental benefits for Americans that are significantly greater than the costs. For example in a single year (2014), the Cross-State Air Pollution Rule alone is projected to produce benefits valued at $120 billion to $280 billion and to avoid:

- Up to 34,000 premature deaths
- 15,000 heart attacks
- 400,000 cases of aggravated asthma
- 19,000 cases of acute bronchitis
- 19,000 hospital and emergency room visits
- Over 1.8 million days when people miss work or school

In developing these rules affecting the power sector, the EPA has focused on identifying any potential adverse impact on electric reliability. Reliability impacts have been analyzed in the Regulatory Impact Analyses that the EPA has conducted for the air and water rules it has proposed thus far, and the Agency will build upon these analyses as it finalizes power sector regulations. These analyses project that the EPA's rules will result in only a modest level of retirements – of older, dirtier, less efficient power plants – and that these retirements are not expected to have an adverse impact on electric generation resource adequacy. The EPA has benefited from discussions with the Department of Energy and the Federal Energy Regulatory Commission with regard to electric reliability issues and has incorporated information from the North American Electric Reliability Corporation (NERC) into its rulemakings.

As you know, a variety of other entities have published analyses of the impacts of the Agency's rules affecting the power sector over the course of the past year. I would like to take advantage of this opportunity to briefly summarize this external work.

In August 2010, the Analysis Group released a report commissioned by several utilities on the reliability impacts of the Transport Rule and Mercury Air Toxics Standard. Their analysis concluded that the *"electric industry is well-positioned to comply with EPA's proposed air regulations without threatening electric system reliability."* This month, they updated that report based on the actual Mercury Air Toxics Standard proposal, recent financial statements from industry, and recent activity in the markets for additional electricity capacity. This update *"reaffirms the major conclusion of the prior report that the electric industry can comply with EPA's air pollution rules without threatening electric system reliability provided that EPA, the industry and other agencies take practical steps to plan for the implementation of these rules and adopt appropriate regulatory approaches."*[1]

The EPA is aware of other industry studies suggesting, contrary to the EPA and other groups' analyses, that these rules will result in substantial power plant retirements that will have adverse effects on electric reliability in some regions of the country. While the particulars of these analyses differ, in general they share a number of serious flaws that call their conclusions into question:

- First, these studies often make assumptions about the requirements of the EPA rules that are inconsistent with, and dramatically more expensive than, the EPA's actual proposals.
- Second, in reporting the number of retirements, many analyses fail to differentiate between plant retirements attributable to the EPA rules and inefficient and costly plants that that are already scheduled for retirement because owners make the business decisions not to pay to clean up their emissions.
- Third, many analyses do not account for the whole host of tools, including new generation, demand response, energy efficiency, transmission upgrades and energy storage, that can be used to maintain reliability.

For example, the NERC report released last fall attributed the "greatest potential impact" to the not-yet-proposed section 316(b) cooling water intake rule. The analysis incorrectly assumed that

[1] Analysis Group, June 2011, "Ensuring a Clean, Modern, Electric Generating Fleet while Maintaining Electric System Reliability" (emphasis added).

in order to deal with the entrainment aspects of cooling water withdrawal, the EPA's rule would require installation of cooling towers at virtually all existing power plants. This assumption alone accounts for up to 40 gigawatts of projected retirements in the NERC report, and several other studies share this same assumption. In reality, the proposed rule requires a plant-by-plant determination of appropriate technology for entrainment by permitting authorities (mostly States) and requires these authorities to take costs and impacts on electric reliability into account. Because the now proposed 316(b) rule is based on site-specific decisions to determine if cooling towers are appropriate, it is not possible to predict how much capacity will be affected, but it will clearly be much less than originally predicted. Moreover, industry has applauded this flexible, site-specific approach. The NERC report also failed to include many relevant response measures available to States, State Public Utility Commissions, and utilities, and relied on an out-of-date long-term reliability assessment[2] (also done by NERC) that understated future electric generating capacity slated to come online and overstated future growth in electricity demand.

We also understand that staff of the Federal Energy Regulatory Commission (FERC) prepared a draft internal analysis around the same time as the NERC report was released. Based on the brief discussions my staff had with FERC staff about this analysis last year, the analysis appeared to have many of the same limitations described above. Among other issues, it was developed before the EPA proposed most of the rules in question and assumed some requirements that were far more stringent that what the EPA actually proposed. For instance, like the NERC study, it appeared to assume that the EPA's 316(b) cooling water intake rule would require installation of expensive cooling towers at most or all existing power plants. In addition, unlike the analyses that the EPA does in support of its rules, which take account of the actual economics that govern decisions at the plant in relation to local power markets, the draft FERC staff analysis was based on subjective judgments about the importance of various factors, greatly undermining its accuracy. These observations should in no way be taken as criticisms of FERC, but rather as an acknowledgment of the limitations of this particular draft analysis, which was based on very limited information. The EPA has benefited from its interactions with FERC and will continue to work the Commission so that we can jointly assess and address any potential localized reliability concerns.

The most recent analysis conducted on these issues is last month's report by the Bipartisan Policy Center. That report identified a variety of significant flaws in many of the previous industry studies of reliability and concluded that "*scenarios in which electric system reliability is broadly affected are unlikely to occur*."[3] I am providing a copy of that report as an attachment.

Finally, although the EPA's analyses and other recent analyses that reflect our proposed rules indicate that significant adverse impacts on electric reliability are highly unlikely, there are multiple tools to address any such issues should they arise in a particular, localized case. As a letter EPA received in March from several utilities emphasized, "If there are specific local reliability concerns, state and federal regulators have an array of tools to moderate impacts on the electric system, where necessary."

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[2] http://www.nerc.com/page.php?cid=4%7C61

[3] Bipartisan Policy Center, June 2011, "Environmental Regulation and Electric System Reliability"

Detailed responses to your specific questions and requests are provided in the enclosures. Again, thank you for your letter. Please contact me with any questions, or your staff may contact Tom Dickerson in the EPA's Office of Congressional and Intergovernmental Affairs at (202) 564-3638.

Sincerely,

Bob Perciasepe

Bob Perciasepe

Enclosures

cc: The Honorable Henry A. Waxman
Ranking Member

Responses to Information Requests

1. On January 12, 2010, Administrator Jackson released a memorandum to all EPA employees announcing seven priorities for the agency. One of these priorities was "Improving Air Quality," and she stated: "EPA will develop a comprehensive strategy for a cleaner and more efficient power sector, with strong but achievable emission reduction goals for S02, NOx, mercury and other air toxics."

a. Has EPA developed a comprehensive strategy? If yes, provide a copy of the document(s) reflecting that strategy.

The EPA's strategy for a cleaner more efficient power sector is laid out in the preamble for the proposed Transport Rule (later finalized as the Cross-State Air Pollution Rule), Section III. E, "Anticipated Rules Affecting the Power Sector." (See: http://www.gpo.gov/fdsys/pkg/FR-2010-08-02/pdf/2010-17007.pdf#page=1.) In it, the EPA discusses the comprehensive requirements that will yield substantial health and environmental benefits that can be achieved while maintaining a reliable and affordable supply of electric power across the economy. As we say in the preamble, the rules under the CAA will substantially reduce the emissions of SO2, NOX, mercury, and other air toxics. To the extent that the Agency has the legal authority to do so while fulfilling its obligations under the Act and other relevant statutes, the Agency will also coordinate these utility-related air pollution rules with upcoming regulations for the power sector from the EPA's Office of Water (OW) and its Office of Resource Conservation and Recovery (ORCR). The EPA expects that this comprehensive set of requirements will yield substantial health and environmental benefits for the public, benefits that can be achieved while maintaining a reliable and affordable supply of electric power across the economy. In developing and promulgating these rules, the Agency will be providing the power industry with a much clearer picture of what the EPA will require of it in the next decade. In addition to promulgating the rules themselves, the Agency will engage with other federal, state and local authorities, as well as with stakeholders and the public at large, with the goal of fostering investments in compliance that represent the most efficient and forward-looking expenditure of investor, shareholder, and public funds, resulting, in turn, in the creation of a clean, efficient, and completely modern power sector.

b. Has EPA prepared any analysis of the effect of this coordinated power sector effort on jobs, the economy, or the competitiveness of U.S. industry? If yes, provide any such analysis.

The EPA does a regulatory impact assessment (RIA) that includes information on the economic impacts of all major regulations.

- The RIA for the final Cross-State Air Pollution Rule (originally proposed as the Transport Rule) can be found on the EPA's website at: http://www.epa.gov/airtransport/pdfs/FinalRIA.pdf.
- The RIA for the proposed Mercury and Air Toxics Standards Rule can be found at: http://www.epa.gov/ttn/ecas/regdata/RIAs/ToxicsRuleRIA.pdf.
- The RIA for the proposed Cooling Water Intake Rule can be found at: http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/upload/econandbenefits.pdf.
- The RIA for the proposed Coal Combustion Residue Rule can be found at: http://www.regulations.gov/#!documentDetail;D=EPA-HQ-RCRA-2009-0640-0003.

c. Has EPA prepared any analysis of the impact of greenhouse gas (GHG) regulation on the regulation of criteria pollutants and air toxics? If yes, provide any such analysis.

The EPA has not yet done an analysis of the New Source Performance Standard for greenhouse gases because the content of the rule is under consideration and it has not been proposed.

2. EPA has adopted and is planning to adopt a series of regulations affecting the electric utility industry. These rules include the proposed Transport Rule announced in July 2010 and planned additional transport rules to address revised air quality standards; the proposed utility national emissions standards for hazardous air pollutants and new standards of performance announced in March 2011; GHG regulations including GHG New Source Performance Standards for power plants which EPA plans to propose in July 2011; the proposed coal ash rule announced in June 2010; National Ambient Air Quality Standards (NAAQS) for ozone, particulate matter, sulfur dioxide (S02), and nitrogen dioxide (N02); and the cooling water intake structures rule announced in March 2011 under Section 316 of the Clean Water Act.

a. Has EPA undertaken any analysis of the cumulative impacts of all of these regulations together with other regulation that EPA has adopted on the energy sector? If yes, provide a copy of all such analyses.

The EPA's general practice when analyzing a new rule is to incorporate into the modeling the effects of previously finalized rules. In certain circumstances, the EPA also includes the effects of proposed rules. For example, the analysis of the proposed MATS rule included the effects of the proposed Transport Rule (which has now been finalized as the Cross-State Air Pollution Rule). The EPA has also prepared several peer-reviewed analyses of the cumulative cost and benefits impacts of Clean Air Act programs. Most recently, this year the EPA released such an analysis of post-1990 Clean Air Act programs. Results of that analysis show benefits of these

programs, including the Title III programs, exceed their costs by a wide margin and at limited impact to affected industries. For more information, please refer to: http://www.epa.gov/oar/sect812/prospective2.html.

b. Has EPA undertaken any analysis of the potential cumulative impacts of these regulations, on the energy sector, on domestic manufacturing and energy-intensive and trade-exposed industries, including but not limited to the chemicals, glass, iron and steel, cement, aluminum, metal casting, and pulp and paper industries? If yes, provide a copy.

The EPA performs an assessment of the economic impacts of all major regulations. Once a regulation has been proposed it becomes part of the baseline against which future regulations are analyzed. The Regulatory Impact Analyses (RIAs) for the proposed Mercury Air Toxics Standards (MATS) Rule and the final Cross-State Air Pollution Rule provide extensive information about the costs and benefits of these individual proposed or final rules. For example, this information includes estimated costs for electric generating units to comply with the proposed regulations, and electricity price estimates for electricity consumers. The MATS analysis includes both the proposed MATS and the proposed Transport Rule, since the Transport Rule proposal (later finalized as the Cross-State Air Pollution Rule) was included in the baseline. The analyses for each proposed or final rule can be found at: http://www.epa.gov/ttnecas1/ria.html.

Similarly, the RIA for the 316(b) rulemaking examined the impacts of that rule on the energy and certain manufacturing sectors. See the supporting document, *Economic and Benefits Analysis for Proposed Section 316(b) Existing Facilities Rule*, in particular, Chapters 4, 5 and 6. The document can be found at: http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/upload/econandbenefits.pdf.

The RIA for the Coal Combustion Residues proposed rule includes an estimate of the impact of the rule on 13 industries that use coal combustion residues. That RIA can be found at: Document ID nr. EPA-HQ-RCRA-2009-0640-0003, at: http://www.regulations.gov.

The EPA will continue to analyze the combined impacts of power plant regulations by incorporating previously finalized rules into the baseline of regulatory impact analyses. This allows the public to understand the specific impacts of the proposed rule and the overall picture for the power sector and affected industries. The EPA has also prepared a peer-reviewed analysis of the cumulative cost and benefits impacts of Clean Air Act programs in 2020 for regulations imposed as of late 2005. Results of that analysis show benefits of these programs, including the Title III programs, exceed their costs by a wide margin and at limited impact to affected industries. For more information, please refer to: http://www.epa.gov/oar/sect812/prospective2.html.

c. Has EPA consulted with North American Electric Reliability Corporation (NERC), or any regional entity, on issues related to electric reliability? If yes, describe the consultation including the context in which the consultation occurred, the date on which it occurred, issues discussed, and conclusions drawn.

NERC conducted courtesy briefings to stakeholders, including the EPA, to discuss their "2010 Special Reliability Scenario Assessment: Resource Adequacy Impacts of Potential U.S. Environmental Regulations," and outlined preliminary results of the draft report. Their outreach took place prior to the report's release in October of 2010. The EPA uses NERC information and data extensively when conducting detailed power sector analyses and has incorporated numerous assumptions and data parameters into the Integrated Planning Model (IPM), which is used by the EPA to support certain regulations affecting the power sector. These parameters and assumptions include:

- Representation of NERC regions.
- NERC's forecasts of peak energy demand, by region.
- NERC's annual joint limits to the transmission capabilities between model regions.
- NERC's assessment of power plant "availability."
- NERC's reserve margin requirements.
- Facility level data, taken from NERC Electricity Supply and Demand database.

More detail on these assumptions can be found in the documentation for IPM on EPA's website: http://www.epa.gov/airmarkets/progsregs/epa-ipm/BaseCasev410.html#documentation

3. In the proposed Transport Rule, 2 EPA included a discussion of "Rules Affecting the Power Sector," and stated that: "The rules under the CAA will substantially reduce the emissions of S02, NOx, mercury, and other air toxics. To the extent that the Agency has the legal authority to do so while fulfilling its obligations under the Act and other relevant statutes, the Agency will also coordinate these utility-related air pollution rules with upcoming regulations for the power sector from EPA's Office of Water (OW) and its Office of Resource Conservation and Recovery (ORCR)."

a. Describe any efforts EPA has made to coordinate these power sector rules and provide documentation reflecting such efforts.

The EPA's regulatory development process features the use of workgroups that include staff from interested offices from across the agency. Staff and managers from the air, water and waste offices are involved in development of the power plant rules. The following is a link to a description of the EPA's regulatory development process: http://www.epa.gov/ttnecas1/econdata/Rmanual2/3.1.html.

b. Has EPA prepared any analyses of the cumulative impacts of these rules on the U.S. economy, jobs and/or the competitiveness of U.S. businesses? If yes, provide copies of all such analyses. If not, state whether EPA plans to prepare such an analysis and when it will be prepared.

As explained above, the EPA performs an assessment of the economic impacts of all major regulations. Once a regulation has been proposed it becomes part of the baseline against which future regulations are analyzed. The RIA for the proposed Mercury Air Toxics Rule and Transport Rule provide information on the job impacts of the individual proposed rules. For example, this information includes estimated job losses in certain sectors of the economy and job gains due to installation of pollution control equipment and associated materials. The analyses for each of these proposed rules can be found at: http://www.epa.gov/ttnecas1/ria.html. As indicated in the response to question 2.b., above, the EPA also has analyzed the impacts of the 316(b) rulemaking on the economy and jobs.

The EPA will continue to analyze the combined impacts of power plant regulations by incorporating previously finalized rules into the baseline of regulatory impact analyses. This allows the public to understand the specific impacts of the proposed rule and the overall picture for the economy and affected industries. The EPA has also prepared a peer-reviewed analysis of the cumulative impacts of Clean Air Act programs in 2020 for regulations imposed as of late 2005 including impacts on the US economy. Results of this analysis show that the impacts on the U.S. economy are small, and that the impact on affected industries is limited. For more information, please
refer to:
http://www.epa.gov/oar/sect812/prospective2.html.

c. Has EPA prepared any analyses of the cumulative impacts of these rules on the coal industry, coal producing states, and/or states that rely primarily on coal for generation of electricity? If yes, provide copies of all such analyses. If not, state whether EPA plans to prepare such an analysis and when it will be prepared.

The RIAs for the EPA's rules look closely at the effect on the coal industry, coal producing states, and states that rely primarily on coal for generation of electricity. The EPA uses the Integrated Planning Model (IPM), which provides a detailed framework and includes a painstaking bottom-up assessment for coal, including coal supply estimates and demand regions (84 coal supply curves), coal quality characteristics, assignment of coals to power plants, the coal transportation network, and also reflects coal exports, imports, and non-electric sector demand. EPA's recently proposed Mercury and Air Toxics Standards (MATS) for power plants includes a thorough impact assessment for coal of both the proposed MATS and the proposed Transport Rule, since the Clean Air Transport Rule proposal was included in the baseline.

More detail on EPA's coal assumptions can be found in Chapter 9 of the documentation for IPM on EPA's website:

http://www.epa.gov/airmarkets/progsregs/epa-ipm/BaseCasev410.html#documentation

4. Has EPA consulted at any time since January 2009 with the Federal Energy Regulatory Commission, Department of Energy, Council on Environmental Quality, Office of Management and Budget, or any other federal agency or department on issues regarding the potential impacts of its GHG or other power sector rules referenced above on electricity reliability? If yes:

a. **Describe each consultation, including where it occurred, the date on which it occurred, and the participating agencies.**

b. **Describe in detail the outcome of those consultations.**

c. **Provide all documents relating to those consultations.**

A list of meetings involving the EPA and one or more of these entities at which electric reliability issues relating to the EPA's power sector rules were discussed is provided in Appendix A. Documents related to these meetings are provided in the enclosed CD and are listed in Appendix A.

5. Is EPA participating in any interagency task forces or other working groups to address issues related to the impacts of EPA's power sector rules on electric reliability? If so, provide a detailed response including but not limited to:

a. The members of the interagency task force(s) or working group(s);
b. When the interagency task force(s) or working group(s) were formed;
c. The statutory authority under which the task force(s) or working group(s) have been formed;
d. The dates on which the task forces or agencies have met to address issues related to the impacts of EPA's power sector rules on electric reliability; and,
e. Any minutes, communications or other documentation relating to the work of the task force(s) or working group(s).

No, the EPA is not participating in any formal interagency task forces or other working groups of this nature. The response to question 4 above identifies meetings that EPA staff have had with staff from FERC, DOE, and CEQ with regard to electric reliability issues related to EPA regulations.

6. What emergency authority exists to waive environmental regulations if they threaten electric reliability? To the extent such authority exists, what is EPA's role in

decisionmaking to invoke that authority, and how would EPA coordinate with other relevant agencies?

The Clean Air Act provides a range of tools to ensure the protection of public health and compliance with environmental regulation while maintaining a reliable electric supply. Many of these tools have been previously employed to address electric reliability concerns.

Perhaps most directly relevant to electric reliability concerns is the flexibility provided by the Clean Air Act's enforcement provision, Section 113. While this provision does not specifically address electric reliability, as discussed in response to question 7, it does provide the Administrator with significant discretion in enforcement of the Act, which has been exercised previously to address reliability issues. Section 113 provides the EPA (and delegated authorities) with a broad toolkit that can be used separately from, or in conjunction with, other authorities available to the EPA and other agencies. Pursuant to Section 113, the EPA may use its enforcement authorities to craft a case-specific administrative order or civil judicial settlement (in the latter instance working with the Department of Justice) to bring a source into compliance in a manner that maintains the reliability of the electric grid.

In using its Section 113 authorities and evaluating compliance requirements, the EPA has a long history of working closely with other agencies and key stakeholders. On future matters where electric reliability may be an issue, the EPA would expect to work on a case-by-case basis with sources with direct compliance obligations and oversight agencies with responsibility to assure a reliable supply of electricity, such as: State Public Utility Commissions, State environmental agencies, Regional Transmission Organizations, Independent System Operators, the North American Electric Reliability Corporation, the Federal Energy Regulatory Commission (FERC) and the Department of Energy (DOE).

In addition, other sections of the Clean Air Act incorporate flexibility mechanisms that may be relevant. For example, Section 110(f) establishes a process by which a Governor may petition the President to determine that a "national or regional energy emergency exists of such severity" that suspension of any part of a State Implementation Plan (SIP) and certain acid rain-related requirements may be necessary and other means of responding to the energy emergency may be inadequate. Upon issuance of the determination by the President, a Governor may suspend applicability of SIP or certain acid-rain requirements to a source if the Governor finds that a temporary energy emergency involving high levels of unemployment or loss of energy supply to residential dwellings exists in the vicinity of the source and such unemployment or loss can be alleviated by the emergency suspension. The Administrator of the EPA may disapprove a suspension if she determines that it does not meet the requirements of section 110(f)(2). Any such suspension is limited to a maximum of four months.

Section 112 of the Clean Air Act provides that existing sources subject to standards to control hazardous air pollutants must comply with those standards as expeditiously as practicable, not to exceed three years from the effective date of the regulations. However, if a source is unable to comply within three years, the permitting authority, may grant an extension for up to a one year if such time is necessary for the installation of controls. This provision does not address electric reliability per se, but provides flexibility that may be relevant in this area.

The enforcement authorities under Section 309 of the Clean Water Act likewise provide flexibility to ensure that the environmental objectives and requirements of the statute can be achieved without compromising electric reliability. In the event that a permittee is unable to meet statutory or permit requirements immediately, the EPA may issue a compliance order, or enter into a civil judicial settlement (in the latter instance working with the Department of Justice) to bring a source into compliance with these requirements in a reasonable time.

Your letter references the EPA's forthcoming standards under Section 316(b) of the Clean Water Act for cooling water intake structures at power plants and at other industrial facilities. The EPA's proposed rule would expressly require the permitting authority to consider local energy reliability concerns in establishing site-specific standards on cooling water intake structures. In addition, even where closed-cycle cooling is required, the proposed regulations provide the permit writer with the discretion to consider energy reliability and latitude in establishing a compliance schedule. Finally, the Clean Water Act authorizes the EPA to consider energy impacts in establishing technology-based effluent limitations guidelines and standards for categories of direct and indirect dischargers, including power plants, under Sections 301, 304, 306 and 307 of the Act.

7. In the past, has EPA exercised emergency authority to waive environmental regulations to ensure reliability of energy supply? If yes, please identify each such instance, including the dates, facilities involved and the nature of the action taken by EPA.

The EPA has a history of working with other regulatory agencies, States and the regulated community to ensure that critical power plants can operate when needed to resolve reliability issues and avoid power outages. The following examples document some of the EPA's actions in this regard.

During the 2001 energy shortfall in the West, in response to various State proclamations of emergency and orders from energy regulatory agencies, the EPA worked with the States, Independent System Operators and local air pollution agencies to formulate case-specific approaches that allowed critical projects to move forward quickly in order to minimize likelihood of blackouts. These approaches took the form of orders that acknowledged the violation of state air pollution limits and other requirements, in instances where sources were employing, or agreed to employ, appropriate air pollution-minimizing control technologies. In most of these agreements, sources also agreed to come into full compliance by a date certain, and in most cases agreed to specific emission limits during the noncompliant periods and to conduct, or to fund, environmentally beneficial projects and/or to purchase allowances that would offset pollution emitted during the time that the source was out of compliance.

More recently, the EPA has used its enforcement tools to address reliability issues that might arise when plants are temporarily shut down in order to install emissions controls and to ensure reliable operation. In 2005 and 2006, the EPA worked with DOE, FERC, the District of Columbia Public Service Commission (DCPSC), the Virginia Department of Environmental Quality (VADEQ), and Mirant Potomac River LLC (Mirant) to assess Mirant's impact on the

Clean Air Act's National Ambient Air Quality Standards (NAAQS) and allow continued operation of its generating units at a level that both ensured electric reliability and minimized emissions of air pollutants. In response to an unexpected and sudden shutdown by Mirant of generating units to address NAAQS concerns, DOE ordered the utility to immediately restart and operate and promptly sought the EPA consultation and involvement. Together, the EPA and DOE and the aforementioned entities resolved the matter through a number of steps that included a short-term informal agreement and formal administrative orders by the EPA and DOE that each accounted for the parallel authority of the other. The EPA order, which is provided on the enclosed CD, established a set of operating limitations and procedures designed to both protect air quality and provide the company with the operating flexibility needed to ensure reliable electrical service.

In 2008, the EPA entered into the attached consent decree with American Electric Power (AEP) that required the installation of pollution controls in AEP's eastern fleet of coal-fired generating units. To address AEP's concern that then unknown and unknowable factors might create a situation in which temporary removal of a unit from service for control installation could create a serious reliability problem, the EPA included specific language in the consent decree to excuse, under specific circumstances, strict compliance due to such events as failure by a permitting authority to issue a necessary permit and orders by regulatory and governmental authorities, acting under and authorized by applicable law, to operate a unit.

Importantly, such approaches must follow a narrow set of principles, so that the protections afforded by our nation's public health and environmental laws are not abrogated. By way of illustration of such principles, included in the enclosed CD is a memo from the Sylvia Lowrance, Acting Assistant Administrator for Enforcement and Compliance Assurance that guided the approach the EPA used during the 2001 period.

In addition, during the late 1970s, President Carter issued several determinations under section 110(f) of the Clean Air Act that regional energy emergencies existed, thereby allowing Governors in the affected States to suspend applicability of certain regulatory requirements to sources in those areas. For example, in February 1979, the Florida Governor sought a suspension on behalf of Florida Power & Light and other utilities because of limited availability of low-sulfur oil needed to meet emission limits in Florida's State Implementation Plan (SIP). President Carter issued a determination that a regional energy emergency existed, and the Governor suspended portions of portions of the SIP to allow the utilities to burn higher sulfur oil. See 44. Fed. Reg. 21,245 (April 6, 1979). President Carter also issued determinations that regional energy emergencies existed in Ohio, Oregon, and Pennsylvania due to limited supply of low-sulfur oil needed to meet emission limits in those states.

8. If EPA or other federal authorities exercise such emergency authority to direct utilities or electricity generators to continue to operate to ensure reliability of electricity supply:

> **a. Will the utility or electricity generators be protected from penalties for violations of the environmental regulations or will they potentially be subject to penalties?**

b. Will the utility or electricity generators be protected from civil or criminal enforcement actions by federal or state regulators or will they potentially be subject to enforcement actions?

c. Will the utility or electricity generators be protected from citizen suits or actions by third parties or will they potentially be subject to suits or third party actions?

As discussed in the response to question 6, the EPA's enforcement authorities under Section 113 of the Clean Air Act and Section 309 of the Clean Water Act are valuable tools that can be applied in a case-specific manner that ensures the reliable supply of electricity while protecting public health and bringing sources into compliance with environmental regulations. To the extent that the EPA uses such authorities, its response would be guided by the particular situation at hand. Decisions about the particular kind of enforcement tool utilized and the appropriateness of a penalty would be highly fact specific. We would expect that principles similar to those discussed in the response to question 7 would guide the Agency's actions.

With regard to the question about citizen suits, Section 304 of the Clean Air Act provides third parties, after a 60-day notice, the authority to bring a civil action against any person who is alleged to have violated or to be in violation of Clean Air Act emissions standards or limitations, orders related thereto and certain permitting requirements. However, such an action can only be maintained if the EPA or a State is not already "diligently prosecuting" a civil action to bring the source into compliance. In the event that the EPA or a State has undertaken a civil action, a citizen/third party has the right to intervene in the action. If a citizen suit were brought and challenged, the question whether the EPA or a State is "diligently prosecuting" the relevant matter is ultimately a judicial decision and turns on what actions either governmental agency has taken. There were not any citizen challenges to any of the cases noted in the answer to Question 7, above. Aside from any legal bar to citizen suits, the EPA believes that the facts and circumstances that would motivate the EPA to utilize its enforcement authorities in a flexible manner to ensure reliability would have a significant impact on both the inclination of a citizen to challenge the underlying conduct of an electric generator or other regulated entity as well as a court's disposition of any such challenge.

The citizen suit provision of the Clean Water Act (Section 505) operates similarly and implicates similar considerations.

Appendix A
Response to Question 4

Meetings and Phone Calls Between EPA and FERC, DOE, and CEQ

The following is a list of meetings and phone calls between the EPA and one or more of FERC, DOE, and CEQ, at which issues related to the potential impacts of the EPA's power sectors rules on electric reliability were at least one of the subjects of discussion. As to OMB, the subject of impacts on electric system reliability is discussed in the EPA's Regulatory Impact Analyses for various rules affecting the power sector, which were submitted to OMB and were subject to interagency review. Apart from conversations regarding the relevant text in technical support documents for rules, the EPA did not consult with OMB on this subject.

Date	Location	Participants	Purpose/Subject
8/18/10	CEQ	CEQ, DOE, EPA, and FERC staff	CEQ convened a meeting to discuss the EPA's analysis of pending rules affecting power plants, including impacts on costs, generation mix, reliability, and other factors.
9/8/10	FERC	EPA and FERC staff	The EPA staff met with FERC staff to follow up on the 9/8/10 meeting at CEQ. The EPA staff discussed the EPA's modeling approach and FERC staff discussed tools used by FERC in reliability analysis.
10/5/10	CEQ	CEQ, DOE, EPA, and FERC staff	CEQ convened a meeting to discuss potential impacts of the EPA rules on the power sector. DOE's Energy Information Administration (EIA) presented its Annual Energy Outlook (AEO) 2010 reference case for the power sector and some special energy efficiency cases from that report.
10/20/10	CEQ	CEQ, EPA, and FERC staff	CEQ convened a meeting to explore options for consultation between the EPA and FERC with regard to the impacts of the EPA air regulations on electric reliability.
10/26/10	Phone	FERC Chairman Jon Wellinghoff and EPA Assistant Administrator Gina McCarthy	Discussion of NERC's report on the reliability impacts of the EPA regulations
10/27/10	FERC	CEQ, EPA, FERC staff	FERC staff presented an informal preliminary assessment of potential reliability issues associated

			with the EPA regulations for power plants. The EPA discussed its analysis and the type of information that could be made available for further analysis.
11/4/10	Phone	EPA and FERC staff	Follow-up discussion of the information provided at the 10/27/10 meeting at FERC and how it could be used for further analysis.
11/29/10	EPA	FERC Commissioners Norris and LaFleur and FERC staff; EPA Assistant Administrator Gina McCarthy and EPA staff	The EPA provided an overview of the EPA's pending regulations for power plants under the Clean Air Act.
1/12/11	EPA	DOE, EPA	Discussion of potential DOE-EPA engagement with respect to modeling and analysis related to potential the EPA power sector regulations.
2/2/11	EPA	DOE, EPA	The EPA provided overview of draft proposed Mercury and Air Toxics Standards rule for DOE staff that had not attended to 1/12/11 meeting.
2/8/11	EPA	DOE, EPA	The EPA provided briefing on draft proposed Mercury and Air Toxics Standards rule.
2/10/11	Phone	DOE, EPA	Follow-up discussion from 2/8/11 meeting.
2/14/11	NARUC Winter Committee Meeting (Washington, DC)	EPA and FERC staff	The EPA and FERC staff had lunch together during the National Association of Regulatory Utility Commissioners' winter committee meeting. They discussed ways in which the EPA staff could participate in regional transmission planning processes.
2/16/11	FERC	CEQ, DOE, EPA, and FERC staff	CEQ convened a meeting to discuss the impacts of the forthcoming Transport Rule/Cross-State Air Pollution Rule and proposed Mercury and Air Toxics Standards Rule. The EPA provided a presentation of its preliminary modeling of the proposed rules.
2/17/11	DOE	DOE, EPA	The EPA provided preliminary modeling analysis of proposed Transport Rule/Cross-State Air Pollution Rule and Mercury and Air Toxics

			Standards Rule.
2/25/11	Phone	DOE, EPA	Follow-up discussion regarding previous meeting between CEQ, DOE, the EPA, and FERC.
3/3/11	EPA	DOE and EPA staff	Meeting to discuss potential DOE tools and capacity to assess potential resource adequacy effects of the EPA power sector rules
3/4/11	Phone	DOE, EPA	The EPA provided preview of preliminary modeling results for proposed Transport Rule/Cross-State Air Pollution Rule and Mercury and Air Toxics Standards Rule.
3/8/11	DOE	DOE, EPA	The EPA provided updated results from preliminary modeling results for the proposed Transport Rule/Cross-State Air Pollution Rule and Mercury and Air Toxics Standards Rule.
3/14/11	Phone	EPA and FERC staff	Biweekly teleconference regarding assessment of power sector impacts of the EPA rules. The EPA discussed final modeling for its proposed Mercury and Air Toxics Standards Rule for power plants, signed on 3/16/11.
3/18/11	EPA	DOE and EPA staff	Follow-up meeting from 3/3/11 meeting to discuss potential DOE tools and capacity to assess potential resource adequacy effects of the EPA power sector rules
3/30/11	Phone	EPA and FERC staff	Biweekly teleconference regarding assessment of power sector impacts of the EPA rules. The EPA provided a brief update on its recently issued proposed cooling water intake rule under Section 316(b) of the Clean Water Act.
4/4/11	FERC	EPA and FERC staff	FERC staff discussed how various utility planning authorities address proposed plant closures under utility tariffs and other mechanisms.
4/13/11	Phone	EPA and FERC staff	Biweekly teleconference regarding assessment of power sector impacts of the EPA rules. Further discussion of modeling of recently proposed Mercury and Air Toxics Standards Rule.
4/27/11	Phone	EPA and FERC staff	Biweekly teleconference regarding assessment of power sector impacts of the EPA rules. Follow-up discussion of the EPA's modeling of its proposed Mercury and Air Toxics Standards Rule.
5/3/11	FERC	FERC Commissioners	Discussion of the EPA's proposed Clean Air Act power sector rules and potential impacts on

		LaFleur and Moeller and FERC staff; EPA Assistant Administrator Gina McCarthy and EPA staff; DOE staff	electric sector costs and reliability.

Documents

On the enclosed CD, the EPA is providing the following documents that the Agency is able to provide at this time in response to the request, in question 4, for documents related to the meetings and phone calls identified above. Where documents are associated with one of the meetings or calls listed above, this is noted. The Agency will continue to work with your staff to accommodate your interest in this subject matter.

EPA Documents

- Key Preliminary Results from Modeling Future Utility Controls Aug 18.pdf (August 18, 2010 meeting)
- Reducing Air Pollutants from Power Plants.pdf (August 18, 2010 and November 29, 2010 meetings)
- Parsedfile_TR SB Limited Trading 2014.xls. (preliminary IPM model output for Transport Rule) (October 27, 2010 meeting)
- Reducing Air Pollution from Power Plants (January 12, 2011 meeting)
- Coal Combustion Residuals Proposed Regulation (January 12, 2011 meeting)
- Clean Water Act Regulations Affecting Electric Utilities (January 12, 2011 meeting)
- FERC-DOE_Review.docx (February 16, 2011 meeting)
- ParsedFile_BC_24.xlsx. (preliminary IPM model output for the Transport Rule and Mercury and Air Toxics Standards Rule) (February 16, 2011 meeting)
- ParsedFileDescription.docx. (provides information on preliminary IPM model output for the Mercury and Air Toxics Standards Rule) (February 16, 2011 meeting)
- Resource Adequacy and Reliability_v3.docx. (EPA draft assessment based on IPM modeling) (February 16, 2011 and February 17, 2011 meetings)
- Toxics and TR Closures-134 CAMD Units Heat Inputs-Feb 15 2011.xlsx. (preliminary IPM modeling output on Transport Rule and Mercury Air Toxics Standards Rule) (February 16, 2011 meeting)
- Documentation Supplement for EPA Base Case v.4.10 PTR – Updates for Proposed Toxics Rule – Draft (February 17, 2011 meeting)
- Toxics Rule: Energy Efficiency Sensitivity – Draft (March 8, 2011 meeting)
- ParsedFile_Toxs_2015Base.xlsx (IPM output for modeling "base case" for Transport Rule and Mercury and Air Toxics Standards rule) (sent to FERC April 4, 2011)

- ParsedFile_Toxs_2015Policy.xlsx (IPM output for modeling "policy case" for Transport Rule and Mercury and Air Toxics Standards rule) (sent to FERC April 4, 2011)
- Addressing the Environmental Impacts of the Power Sector.pdf. (May 3, 2011 meeting)

Other Documents

- Email from FERC staff to EPA staff asking questions regarding EPA modeling of power sector rules (April 13, 2011)
- Email from EPA staff to FERC staff confirming receipt of April 13, 2011 email (April 13, 2011)
- Email from EPA staff to FERC staff providing responses to questions posed in April 13, 2011 email (April 21, 2011)
- Database Questions Response.docx. (attachment to email) (EPA response to questions from FERC regarding IPM modeling) (April 21, 2011)
- FERC RMR Gen Retire Inquiry (follow-up to April 4, 2011 meeting)
- Emails from FERC staff to EPA staff forwarding third-party articles, announcements, or studies:
    - 3/30/11
    - 3/31/11
    - 4/11/11
    - 4/13/11 (2)
    - 4/18/11
    - 4/26/11 (2)
    - 4/28/11
    - 4/29/11
    - 5/2/11
    - 5/5/11 (3)
    - 5/9/11