



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

APR - 2 2014

OFFICE OF CONGRESSIONAL  
AND INTERGOVERNMENTAL RELATIONS

The Honorable Ed Whitfield  
Chairman  
Subcommittee on Energy and Power  
Committee on Energy and Commerce  
U.S. House of Representatives  
Washington, D.C. 20515

Dear Chairman Whitfield:

Thank you for your letter of December 13, 2013, to Acting Assistant Administrator Janet McCabe requesting responses to Questions for the Record following the November 14, 2013, hearing before the Subcommittee on Energy and Power entitled, "EPA's Proposed GHG Standards for New Power Plants and H.R. \_\_, Whitfield-Manchin Legislation."

The responses to the questions are provided as an enclosure to this letter. If you have any further questions please contact me, or your staff may contact Kevin Bailey at [bailey.kevinj@epa.gov](mailto:bailey.kevinj@epa.gov) or (202) 564 2998.

Sincerely,

A handwritten signature in blue ink that reads "Nichole Distefano".

Nichole Distefano  
Deputy Associate Administrator  
for Congressional Affairs

**November 14 2013 House Energy and Commerce EPA Questions for the Record**

**Attachment 1-Member Request for the Record**

During the hearing, members asked you to provide information for the record and you indicated that you would provide that information. For your convenience, descriptions of the requested information based on the relevant excerpts from the hearing transcript are provided below.

**The Honorable Robert E. Latta**

- 1. During the hearing, you agreed to provide the committee with a list of facilities that were using scrubbers when the standards developed to require the use of scrubbers was implemented and made final in the late 1970s. Please provide a list of these facilities.**

The following table provides a list of electricity generating units with scrubbers that were operating or under construction at the time of the 1978 proposed SO<sub>2</sub> NSPS. This list includes some scrubbers that were designed as test facilities rather than permanent installations. See “Electric Utility Steam Generating Units; Background Information for Proposed SO<sub>2</sub> Emission Standards” (see web link) for more information.

<http://nepis.epa.gov/Exe/ZyNET.exe/2000Y6K1.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1976+Thru+1980&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C76thru80%5CTxt%5C00000007%5C2000Y6K1.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p%7Cf&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL>

<b>Unit</b>	<b>Location</b>	<b>Company</b>	<b>Status</b>
Reid Gardner No. 1	Moapa, NV	Nevada Power Company	Operational
Reid Gardner No. 2	Moapa, NV	Nevada Power Company	Operational
Reid Gardner No. 3	Moapa, NV	Nevada Power Company	Operational
D.H. Mitchell	Gary, IN	Northern Indiana Public Service Company	Operational
Sherburne County No. 1	Becker, MN	Northern States Power Company	Operational
Sherburne County No. 2	Becker, MN	Northern States Power Company	Operational
Bruce Mansfield No. 1	Shippingport, PA	Pennsylvania Power Company	Operational
Bruce Mansfield No. 2	Shippingport, PA	Pennsylvania Power Company	Under Construction
Eddystone No. 1A	Eddystone, PA	Philadelphia Electric Company	Operational
San Juan No. 1	Waterflow, NM	Public Service Company of New Mexico	Under Construction
San Juan No. 2	Waterflow, NM	Public Service Company of New Mexico	Under Construction
Winyah No. 2	Georgetown, SC	South Carolina Public Service Authority	Under Construction
Marion No. 4	Marion, IL	Southern Illinois Power Cooperative	Under Construction
R.D. Morrow No. 1	Hattiesburg, MS	South Mississippi Electric Power Assoc.	Under Construction
R.D. Morrow No. 2	Hattiesburg, MS	South Mississippi Electric Power Assoc.	Under Construction
Southwest No. 1 (John Twitty)	Springfield, MO	Springfield City Utilities	Operational

Shawnee	Paducah, KY	Tennessee Valley Authority	Operational
Shawnee	Paducah, KY	Tennessee Valley Authority	Operational
Widows Creek No. 8	Bridgeport, AL	Tennessee Valley Authority	Operational
Martin Lake No. 1	Tatum, TX	Texas Utilities Company	Under Construction
Martin Lake No. 2	Tatum, TX	Texas Utilities Company	Under Construction
Monticello No. 3	Mount Pleasant, TX	Texas Utilities Company	Under Construction
Hunter No. 1	Emery Co., UT	Utah Power and Light Company	Under Construction
Huntington No. 1	Price, UT	Utah Power and Light Company	Under Construction
Tombigbee No. 2 (Lowman)	Jackson, AL	Alabama Electric Cooperative, Inc.	Under Construction
Pleasants No. 1	Bellmont, WV	Allegheny Power System, Inc.	Under Construction
Pleasants No. 2	Bellmont, WV	Allegheny Power System, Inc.	Under Construction
Apache No. 2	Cochise, AZ	Arizona Electric Power Cooperative, Inc.	Under Construction
Apache No. 3	Cochise, AZ	Arizona Electric Power Cooperative, Inc.	Under Construction
Cholla No. 1	Joseph City, AZ	Arizona Public Service Company	Operational
Cholla No. 2	Joseph City, AZ	Arizona Public Service Company	Under Construction
Reid No. 2	Robards, KY	Big Rivers Electric Cooperation	Under Construction
Duck Creek No. 1	Canton, IL	Central Illinois Light Company	Under Construction
Newton No. 1	Newton, IL	Central Illinois Public Service	Under Construction
Conesville No. 5	Conesville, OH	Columbus and Southern Ohio Electric Co.	Operational
Conesville No. 6	Conesville, OH	Columbus and Southern Ohio Electric Co.	Under Construction
Powerton No.5	Pekin, IL	Commonwealth Edison Company	Under Construction
Will County No. 1	Romeoville, IL	Commonwealth Edison Company	Operational
Elrama Power Station	Elrama, PA	Duquesne Light Company	Operational
Phillips Power Station	South Heights, PA	Duquesne Light Company	Operational
Petersburg No. 3	Petersburg, IN	Indianapolis Power and Light Company	Under Construction
Hawthorn No. 3	Kansas City, MO	Kansas City Power and Light Company	Operational
Hawthorn No. 4	Kansas City, MO	Kansas City Power and Light Company	Operational
La Cygne No. 1	La Cygne, KS	Kansas City Power and Light Company	Operational
Jeffery No. 1	St. Mary, KS	Kansas Power and Light Company	Under Construction
Jeffery No. 2	St. Mary, KS	Kansas Power and Light Company	Under Construction
Lawrence No. 4	Lawrence, KS	Kansas Power and Light Company	Operational
Lawrence No. 5	Lawrence, KS	Kansas Power and Light Company	Operational, Under Mod.
Green River No. 1, 2, 3	Central City, KY	Kentucky Utilities Company	Operational
Cane Run No. 4	Louisville, KY	Louisville Gas & Electric Company	Operational
Cane Run No. 5	Louisville, KY	Louisville Gas & Electric Company	Under Construction
Mill Creek No. 3	Louisville, KY	Louisville Gas & Electric Company	Under Construction
Paddys Run No. 6	Louisville, KY	Louisville Gas & Electric Company	Operational
Milton R. Young No. 2	Center, ND	Minnkota Power Cooperative Inc.	Under Construction
Colstrip No. 1	Colstrip, MT	Montana Power Company	Operational
Colstrip No. 2	Colstrip, MT	Montana Power Company	Operational

### **The Honorable David B. McKinley**

1. During the hearing, you agreed to respond in writing regarding how it is that you are testifying that carbon capture and storage (CCS) technologies for coal plants are available now, when back in November 2011, EPA Administrator Lisa Jackson was quoted as stating that CCS technology was “maybe a decade or more” away from being commercially available. The Department of Energy

**similarly put out their own report saying the technology wouldn't be commercially viable until 2020. Please explain why you disagree with the projections of Administrator Jackson and the Department of Energy.**

The EPA has determined that CCS is technically feasible for new coal-fired power plants, because all of the major components of CCS – the capture, the transport, and the injection and storage – have been demonstrated and are currently in use at commercial scale. For example there are several industrial projects in the U.S. that are currently capturing the CO<sub>2</sub> for use in enhanced oil recovery (EOR) or other applications. There have been numerous smaller-scale projects that have demonstrated the technology, and there are several full-scale projects – both in the U.S. and internationally – that are under construction today. Thus, the EPA has determined that partial CCS is the Best System of Emission Reduction (BSER) for new coal-fired power plants.

Several important distinctions must be made when comparing this determination with other evaluations of the technology. For example, very often other evaluations of the state of the technology (i.e., whether it is “technically feasible” or “commercially viable”) have been focused on implementation of full CCS (i.e., capturing 90+% of the CO<sub>2</sub>). In the recently proposed performance standards for new fossil fuel-fired power plants, the EPA determined that “the cost of ‘full capture’ CCS without EOR is outside the range of costs that companies are considering for comparable generation and therefore should not be considered BSER for CO<sub>2</sub> emissions for coal-fired power plants.” (79 FR 1430)

Some evaluations have focused on “widespread” implementation and some have focused on the technical and commercial feasibility of retrofit implementation (i.e., at existing units rather than at new units). The President’s Interagency Task Force on Carbon Capture and Storage was charged with proposing a plan for widespread, cost-effective deployment of CCS by 2020. EPA’s proposal for new power plants does not require, nor does it anticipate, the need for widespread implementation of CCS technology.

#### **The Honorable John D. Dingell**

- 1. During the Hearing, you indicated that you have reached out to stakeholders, including industry stakeholders, about components of greenhouse gas rules for new and existing power plants. Please submit for the record all of the actions you and your office have taken with regard to the development of these rules.**

EPA has participated in more than 200 meetings with utility, labor and environmental groups on the components of greenhouse gas rules since August 2013. More meetings are scheduled for the future. Additionally, an EPA video webinar about the Climate Action Plan and CAA 111(d) has been viewed more than 3,800 times. Furthermore, more than 3,300 people attended and more than 1,600 people offered oral statements at the 11 public listening sessions EPA held around the country, and over 2,000 emails have been received at [carbonpollutioninput@epa.gov](mailto:carbonpollutioninput@epa.gov).

Public hearings were held in the spring of 2012 on the proposed carbon pollution standards for new sources in Washington, D.C. and Chicago. More than 600 people attended these hearings, and more than 300 people provided oral testimony. In addition, more than 2.5 million public comments were received on the previous (April 2012) proposal, and the EPA considered the information contained in those comments in development of the recently proposed new source performance standards.

### **Attachment 2-Additional Questions for the Record**

#### **The Honorable ED Whitefield**

- 1. On June 25, 2013, President Obama issued a Presidential Memorandum directing EPA to re-propose greenhouse gas standards for new power plants no later than September 20, 2013, and to issue a final rule “in a timely fashion” after considering public comments.**

- a. What is EPA’s current schedule for issuing a final rule?**

The proposed Carbon Pollution Standard (CPS) was signed on September 20, 2013 and published on Wednesday, January 8, 2014 in the **Federal Register**. The deadline for public comment on this proposal has been extended from March 10 to May 9, 2014. The agency intends to finalize the CPS in a timely fashion, after consideration of public comments, consistent with statutory obligations.

- 2. The Presidential Memorandum referred to above also directed EPA to propose standards, regulations or guidelines, as appropriate, for modified, reconstructed and existing power plants by June 1, 2014 and finalize them by June 1, 2015.**

- a. Is this EPA’s current schedule for the issuance of standards, regulations or guidelines for modified, reconstructed and existing plants?**

Yes, this is the schedule the agency is currently operating under and we do intend to meet both of these deadlines.

- 3. The Presidential Memorandum referred to above also directed that EPA include in its guidelines addressing existing power plants a requirement that States submit to EPA implementation plans no later than June 30, 2016.**

- a. What does EPA expect the agency’s timeline will be for reviewing implementation plans by state.**

It would be a high priority for the agency, and we would work as expeditiously as possible consistent with requirements that review would require notice and comment rulemaking.

4. Under the language of section 111(d) of the Clean Air Act, EPA establishes a procedure under which States submit to the EPA Administrator a plan that contains "standards of performance" for existing stationary sources.

a. Does EPA agree that it is the role of States, not EPA, to establish standards of performance for existing stationary sources under section 111(d)?

See answer to 4 b.

b. Does EPA agree that States, not EPA, would have the primary role in setting any standards of performance for individual electric utility generating units under section 111(d)?

Section 111(d) provides that states' may establish standards of performance for existing sources of pollutants under certain circumstances and pursuant to a process created through an EPA rulemaking. If a state fails to provide a satisfactory performance standard and plan, the EPA may set performance standards and implement and enforce them in that state. EPA's proposed rule to establish the process for states to set such standards will include solicitation of public comment on the respective roles of the EPA and the states in establishing and implementing standards of performance. At the same time we anticipate proposing that requirements for state plans allow each state to establish programs appropriate to address its own sources and circumstances.

c. Does EPA agree that any standards of performance established for existing electric generating units under section 111(d) should be achievable by individual existing electric utility generating units?

Under the statute, the term "standard of performance" means a "standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated." EPA is exploring all options available for achieving cost effective standards of performance by analyzing, among other things, results from the extensive outreach to states, industry, and other stakeholders we conducted over the past several months.

5. You testified that for EPA's planned greenhouse gas regulations for existing power plants, "EPA will set the target, but then the states will have flexibility to meet that in whatever way makes sense to them. So it does not need to be a unit by unit regulation, or expectation."

a. What do you mean when you refer to "the target" to be set by EPA? Please explain.

A target is a goal established by the emission guidelines. This goal can be expressed in several ways, such as a rate, mass or percentage reduction. States will be expected to meet the target using the programs performance standards or regulations that they designed to address the emission guidelines.

**6. Prior to Administrator McCarthy's signing proposed greenhouse gas standards for new electric utility generating units on September 20, 2013, was EPA aware of the provisions of the Energy Policy Act codified at 42 U.S.C. 15962(i) that state: "No technology, or level of emission reduction solely by reason of the use of technology, or the achievement of the emission reduction, by 1 or more facilities receiving assistance under this Act, shall be considered to be...adequately demonstrated for purposes of (section 111 of the Clean Air Act)...?"**

**a. Given the proposal makes specific reference to technologies receiving assistance under the Energy Policy Act of 2005, why were these provisions not specifically addressed in the proposal?**

EPA does not believe that these provisions impact its determination. EPA based its determination on a number of projects and other information including projects that did not receive any assistance under the Energy Policy Act of 2005 (EPAct05). EPA has issued a Notice of Data Availability (NODA) that notes the availability of a Technical Support Document (TSD), which we have attached, in the rulemaking docket that further details this position.

**7. Prior to Administrator McCarthy's signing proposed green house gas standards for new electric utility generating units on September 20, 2013, was EPA aware of the provisions of the Energy Policy Act codified at 26 U.S.C. 48A(g) that state: "No use of technology(or level of emission reduction solely by reason of the use of the technology), and no achievement of any emission reduction by the demonstration of any technology or performance level, by or at one or more facilities with respect to which a credit is allowed under this section, shall be considered to indicate that the technology or performance level is adequately demonstrated for purposes of section iii of the Clean Air Act..."?**

**a. Given the proposal makes specific reference to technologies receiving tax credits under the Energy Policy Act of 2005, why were these provisions not specifically addressed in the proposal?**

We have attached a TSD which has also been placed in the docket to allow for public comment, which explains EPA's viewpoint on the interaction between EPAct05 and the agency's proposed BSER determination. As the TSD explains, EPA believes that it may use information from the projects if it is used in conjunction with other evidence. As the TSD explains, its determination was in fact based on a larger set of evidence including a number of projects that have not received EPAct05 funding.

**8. To what extent was the U.S. Department of Justice consulted by EPA regarding the proposed standards of new power plants announced on Sept. 20, 2013?**

The U.S. Department of Justice (DOJ) was part of the interagency review process, which was coordinated by the Office of Management and Budget (OMB). During the review, DOJ had

complete access to the proposal and all supporting documentation provided to the OMB as part of the interagency review process.

**9. To what extent was the U. S. Department of Energy (DOE) consulted by EPA regarding the proposed standards for new power plants announced on Sept. 20, 2013?**

The U.S. Department of Energy (DOE) was part of the interagency review process, which was coordinated by the Office of Management and Budget (OMB). As part of this review, DOE had complete access to the proposal and all supporting documentation provided to the OMB as part of the interagency review process.

In addition, DOE was consulted during the development of the Carbon Pollution Standard because the EPA relied on cost assessments conducted by the DOE for new fossil fuel-fired power plants utilizing carbon capture and storage systems.

**a. In your response, please identify which DOE offices(s) and/or laboratories EPA consulted regarding the proposed rule.**

The agency consulted with both DOE's Fossil Energy (FE) Headquarters Office and the National Engineering Technology Laboratory (NETL).

**b. In your response, please identify when EPA consulted with these DOE offices and/or laboratories regarding the proposed rule.**

The U.S. Department of Energy (DOE) was part of the interagency review process, which was coordinated by the Office of Management and Budget (OMB). As part of this review, DOE had complete access to the proposal and all supporting documentation provided to the OMB as part of the interagency review process.

In addition, DOE was consulted several times during the development of the Carbon Pollution Standard because the EPA relied on cost assessments conducted by the DOE for new fossil fuel-fired power plants utilizing carbon capture and storage systems.

**10. Prior to Administrator McCarthy's signing proposed greenhouse gas standards for new electric utility generating units on September 20, 2013, did DOE officials or staff raise concerns regarding EPA's proposed requirement of carbon capture and storage (CCS) technologies for new coal-fired power plants?**

**a. Did DOE officials or staff raise concerns that CCS technologies for new coal-fired power plants are not adequately demonstrated?**

The U.S. Department of Energy (DOE) was part of the interagency review process, which was coordinated by the Office of Management and Budget (OMB). The interagency review, which

included staff from DOE – commented on review drafts of the proposed rule, and all relevant topics were discussed. All comments were resolved prior to OMB clearance of the final document.

- b. Did DOE officials or Staff raise concerns that CCS technologies for new coal-fired power plants are not currently ready for widespread commercial deployment?**

This proposed rule does not require widespread commercial deployment of CCS.

- c. Did DOE officials or Staff raise concerns that the costs of CCS technologies that would be needed for new coal-fired power plants to comply with the rule are prohibitively expensive?**

DOE agreed that the cost estimates provided in NETL's 'Cost and Performance' reports are the best, most thorough and transparent information available. EPA consulted with DOE staff to ensure that the costs were appropriately characterized in the proposed rule.

- d. Did DOE officials or staff raise concerns about the commercial feasibility of the proposed standards for new coal-fired power plants?**

All relevant topics were discussed as part of the interagency review, and all agency comments were resolved prior to clearance of the final document.

#### **The Honorable Joe Barton**

- 1. What is the average cost of construction and operation of a coal-fired power that would comply with current EPA regulation?**

- a. What percentage of the total cost is directed toward emissions control?**  
**b. What studies or analyses does EPA rely on for these estimates?**

EPA is aware of some engineering studies that assess the current cost to construct and operate new coal-fired power plants. EPA relied on the NETL 'Cost and Performance' reports and believes that they are the best, most thorough and transparent studies available. However, those studies include the costs for equipment to control of criteria pollutants (i.e., SO<sub>2</sub>, NO<sub>x</sub>, and PM) and toxic air pollutants (mercury and other metals, toxic acidic gases, etc.) and do not break out costs with and without those controls. As noted below, EPA has broken out the costs for the controls needed to meet the proposed NSPS in the proposed rule.

- 2. What is the average cost of construction and operation of a coal-fired power plant would comply with the recently proposed carbon dioxide emissions standards (not factoring revenue from sale of CO<sub>2</sub>)?**

- a. What percentage of the total cost is directed toward emissions control?**

- b. **What percentage of the cost of emission control is directed toward injection and storage of CO<sub>2</sub>)?**
- c. **What studies or analyses does EPA rely on for these estimates?**

As previously stated, EPA is aware of some engineering studies that assess the current cost to construct and operate new coal-fired power plants. EPA relied on the NETL 'Cost and Performance' reports and believes that they are the best, most thorough and transparent studies available. The EPA estimated the costs for a new supercritical pulverized coal (SCPC) boiler and a new integrated gasification combined cycle (IGCC) that would meet the proposed 1,100 lb CO<sub>2</sub>/MWh performance by implementing partial CCS. Those costs are provided in Table 6 of the proposed rule (79 FR 1430).

**3. What is the status of EPA's proposal to exclude geologically sequestered CO<sub>2</sub> from regulation under the Resource Conservation and Recovery Act's hazardous waste program?**

- a. **Given the great deal of legal and regulatory uncertainty surrounding geologic storage and liability protection, please describe how EPA accounted for these costs.**

On January 3, 2014, EPA finalized a rule to exempt geologically sequestered CO<sub>2</sub> from regulation under the Resource Conservation and Recovery Act's hazardous waste program. Information on the final rule can be found at - <http://www.epa.gov/wastes/nonhaz/industrial/geo-sequester>

EPA prepared a revised analysis of the potential cost impacts associated with the final rule. This revised analysis is presented in the final rule as a support document entitled: *Assessment of the Potential Costs, Benefits, and Other Impacts — Hazardous Waste Management System: Conditional Exclusion for Carbon Dioxide (CO<sub>2</sub>) Streams in Geologic Sequestration Activities: Final Rule (Assessment document)*.

In general, entities that may be directly affected by the final rule include CO<sub>2</sub> generators and sequestration facilities that have UIC Class VI wells. These entities are likely to experience net cost savings as a result of the rule. Entities transporting the CO<sub>2</sub> stream that would otherwise be hazardous under subtitle C of RCRA must continue to meet the baseline DOT requirements and are expected to experience no increased costs, or cost savings. Increased costs associated with the review of selected CO<sub>2</sub> exclusion certification statements are expected for EPA and state governments.