

**SUMMARY OF COMMENTS AND STAFF RESPONSES  
FOR PROPOSED REVISION TO  
THE STATE IMPLEMENTATION PLAN  
FOR REGIONAL HAZE AND TRANSPORT**

**COMMENTS RECEIVED PRIOR TO AND AT THE  
MAY 20, 2013 PUBLIC HEARING**

**Comments from Federal Land Managers (FLMs)**

**U. S. Fish and Wildlife Service (FWS)** - Letter dated April 15, 2013 from Sandra V. Silva, Chief, Branch of Air Quality

- 1. COMMENT:** “Reference to the relevant authority within the U.S. Environmental Protection Agency (EPA) regulation that provide for this BART action should be included in the Proposed BART documentation.” The comment goes on to cite 40 CFR Part 51, Appendix Y guidance on averaging emissions across any set of BART-eligible units within a fence line, referring to the reliance in the BART determination on contemporaneous emission reductions in the cost effectiveness and visibility improvement analyses. In a footnote to the comment, the FWS expressed concern that the final BART emission rate would be greater than presumptive control levels identified in Appendix Y.

**RESPONSE:** The Best Available Retrofit Technology (BART) determination was made through a top-down analysis of control technologies, considering the statutory factors and the presumptive control levels identified in Appendix Y. EPA has stated that “[t]he BART Rule has presumptive limits that act as a starting point for the establishment of BART emission limits unless the state's analysis indicates that an emission limit more or less stringent than the presumptive limit is required.” (*Approval and Promulgation of Implementation Plans; Arkansas; Regional Haze State Implementation Plan; Interstate Transport State Implementation Plan To Address Pollution Affecting Visibility and Regional Haze*, 77 Fed.Reg. 14604, 14611 (Mar. 12, 2012).

In order for the facility to achieve compliance with an emission rate of 0.15 lbs/MMBtu (the presumptive limit), the coal-fired boilers would need to install Dry Flue Gas Desulfurization (DFGD), as shown in previous analyses in support of the original State Implementation Plan and the Federal Implementation Plan (FIP). The analyses documented in the Revised BART Determination (Appendix II-1) conclude that, given the comparable visibility improvement, significantly lower costs, and overall reduced environmental impact, the proposed control (low sulfur coal and Dry Sorbent Injection or DSI) constitutes BART. This determination relies upon an enhanced effectiveness provided through contemporaneous emission reductions from the multi-media, multi-pollutant strategy outlined in the Supplemental BART Determination Information (Appendix II-2). Through incorporation in the First Amended Regional Haze Agreement (Appendix III-1), this strategy was made enforceable and therefore, eligible for reliance upon in the BART analysis.

Relying on the emission reductions inherent in the First Amended Regional Haze Agreement is appropriate in the BART review. There are no provisions in the Regional Haze Rule or guidelines suggesting that States are barred from considering the reduction of emissions attributable to the contemporaneous shutdown of a BART-subject unit in the BART determination for any remaining BART-subject units “within the same fence line.” Instead, in the BART Guidelines,<sup>1</sup> EPA urges States to allow BART subject units “within the same fence line” to average emissions in demonstrating compliance with BART requirements. Although there are no regulatory citations specifically allowing for a contemporaneous retirement to be relied upon in a BART determination, it was clearly contemplated that reductions for one unit could be averaged with reductions at another unit to comply with BART. The BART emission rate of 0.4 lb/MMBtu has been shown to be more cost-effective on a mass basis, as well as a reduction in visibility impairment basis, than the FIP-established 0.06 lb/MMBtu. As was stated previously, the FIP and presumptive limits at a minimum presume installation of DFGD. Therefore, since the proposed BART is found to be more cost-effective for emission reductions and visibility improvement than the FIP, it is necessarily more cost-effective than the presumptive control, which would assume no retirement.

2. **COMMENT:** “On Page 6 of the Revised BART Determination it states that all cost analyses were based on an 85% capacity factor. Appendix Y states, ‘When you project that future operating parameters (e.g., limited hours of operation or capacity utilization, type of fuel, raw materials or product mix or type) will differ from past practice, and if the projection has a deciding effect on the BART determination, then you must make these parameters or assumptions into enforceable limitations. In the absence of enforceable limitations, you calculate baseline emissions based upon continuation of past practice.’” (Section IV.D. STEP 4.d.2) “This would indicate that an 85% capacity limitation should be placed in the permits of the units operating under the proposed BART.”

**RESPONSE:** The 85% capacity factor was identified in the original BART determination and reflected the past actual operation of the facility as documented in annual emission inventories. The rate was relied upon in the FIP and again in the proposed SIP revision. Consistent with the guidance, in the absence of enforceable limitations, DEQ calculated emissions based upon the continuation of past practice. Note that the reduced utilization factors beginning in 2021 for the remaining unit are specified in the Regional Haze Agreement (Feb. 10, 2010), as amended by the First Amended Regional Haze Agreement (Mar. 26, 2013), and will be incorporated into the facility’s air quality permits. These enforceable capacity restrictions are not relied upon in the BART determination, as they are beyond the BART compliance deadline.

3. **COMMENT:** “All of the permits or other enforceable commitments should be posted as an appendix to the BART section of the Regional Haze State Implementation Plan (SIP). This should include emission limitations of zero on the unit that will be closed.”

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<sup>1</sup> See 40 CFR Part 51, Appendix Y, Section V (Enforceable Limits/Compliance Date).

**RESPONSE:** The Regional Haze Agreement as amended by the First Amended Regional Haze Agreement is the enforceable document relied upon for the revised BART determination. The Agreement was included in the appendices. All relevant requirements will be incorporated into the facility's air quality permit, including retirement of the units as proposed. The inclusion of an emission limit of zero is unnecessary.

4. **COMMENT:** In “[t]he fourth paragraph of Page 11 of the Revised BART Determination [i]t is incorrect to dismiss a control strategy [of Dry Flue Gas Desulfurization/Spray Dryer Absorber (DFGD/SDA)] on the basis that the resulting improvement is not perceptible or significant.” “The erroneous imperceptibility discussion should be removed since the last sentence of the paragraph correctly provides a cost per deciview improvement analysis for each control alternative.” (FWS quotes the preamble to EPA’s BART Guidelines which states, “[e]ven though the visibility improvement from an individual source may not be perceptible, it should still be considered in setting BART because the contributions to haze may be significant relative to other source contributions in the Class I areas.”)

**RESPONSE:** DEQ defined the thresholds for causing or contributing to visibility impairment in OAC 252:100-8-73(a)(1) and (2). “A source that is responsible for an impact of 1.0 deciview or more is considered to cause visibility impairment. [ ] A source that causes an impact greater than 0.5 deciviews contributes to visibility impairment.” These thresholds are consistent with EPA guidance. Under the SIP revision, the three year average of the 98th percentile maximum impairment, for three of the four Class I areas impacted is less than the threshold to be considered a contributor to visibility impairment. The three year average for the Caney Creek Class I area remains above 0.5 deciview (dv) at 0.55 dv. The average difference between the remaining impairment under the FIP and the revised SIP is 0.18 dv. Although 1 dv is commonly held as the threshold for perceptibility to the human eye, referring to the difference as trivial (instead of imperceptible) is more accurate and the language has been modified.

5. **COMMENT:** The FWS states that the cost per deciview of visibility improvement and cost per ton of SO<sub>2</sub> control that is stated for *each* control alternative is consistent with the other states’ determinations of reasonable costs. “[C]osts related to non-air quality environmental impacts are a relevant factor to consider as pointed out in the ODEQ analysis. The point that both cost per ton and cost per deciview are reasonable for *each* control alternative is brought up only to confirm the DFGD/SDA alternative should not have been dismissed on the basis of excessive cost under BART but because DSI was chosen on the basis of lower cost. Either control alternative seemed to meet the constraints of the five-factor BART analysis.”

**RESPONSE:** The cost effectiveness for the FIP scenario in terms of visibility improvement across all modeled Class I areas is \$9,639,785 per dv versus the substantially more cost effective revised BART determination of \$5,690,172 per dv. The revised BART determination is justified given that a comparable improvement in visibility is achieved at a much lower cost.

**U.S. Forest Service (FS)** - Letter received May 20, 2013 from Judith Henry, Forest Supervisor and Norman L. Wagoner, Forest Supervisor.

6. **COMMENT:** “As proposed by ODEQ, the SO<sub>2</sub> emission rates for Units 3 and 4 will each be lowered from the present 0.9 lb/mmBTU, utilizing dry sorbent injection (DSI) to 0.65 lb/mmBTU by January 21, 2014, and then to 0.60 lb/mmBTU by December 21, 2014. And by April 26 2016, the SO<sub>2</sub> emission rated for Unit 3 is proposed for further reduction to 0.4 lb/mmBTU (Table II-2), while Unit 4 will be shut down. While these proposed reductions would a be clear improvement from present levels, all are considerably less stringent than EPA’s and the Forest Service’s preferred BART level of 0.06 lb/mmBTU, utilizing DFGD/SDA.”

**RESPONSE:** Dry Flue Gas Desulfurization is a more stringent control technology than DSI. It is also a much more costly control option. The BART review considered the reductions in emissions from the baseline for both units. Reliance upon the emission reductions inherent in the Supplemental BART Determination Information (Appendix II-2) is appropriate in the BART review. See Response to Comment Nos. 1 and 5. The resultant cost effectiveness calculation demonstrates that the SIP proposal is more cost effective than the FIP.

7. **COMMENT:** “It appears ODEQ rejects the use of DFGD/SDA asserting on page 11 of the revised BART determination that the incremental reductions in emissions will not result in perceptible improvement in visibility. The perceptibility of improvement should not be a factor in determining BART. Based on the preamble to EPA’s BART Guidelines: ‘Even though the visibility improvement from an individual source may not be perceptible, it should still be considered in setting BART because the contributions to haze may be significant relative to other source contributions in the Class I areas.’”

**RESPONSE:** See Response to Comment No. 4.

8. **COMMENT:** “It is also noted that the cost per deciview of visibility improvement that is stated for each control alternative is consistent with other states’ determinations of reasonable cost per deciview, and the \$1,544 cost per ton of SO<sub>2</sub> control is reasonable when compared with options utilized across the country. Further, while the cost per ton for DSI is 65% of the more cost effective DFGD/SDA option, the utilization of DFGD/SDA is well over six times more efficient at removing SO<sub>2</sub>. (See Table 8 in ODEQ’s March 20, 2013 Revised BART Determination).”

**RESPONSE:** It is well established in the revised BART determination that the requirements set forth in the proposed SIP revision are more cost effective than the DFGD/SDA option. Focusing on emission factors alone neglects to consider the contemporaneous emission reductions resulting from the shut-down of one of the boilers. Therefore, despite the difference in emission factors, the revised BART determination in the proposed SIP revision provides nearly equivalent reductions in visibility impairment for the Class I areas at much less cost. From a further reasonable progress perspective, the long-term significance of the enforceable lifespans for the two boilers is that it

provides much greater benefit to the Class I areas than the short-term benefits from a strict adherence to a more stringent emission factor.

### **Other Written Comments**

**Letter from the Honorable Scott Pruitt, Attorney General of the State of Oklahoma,**  
received on May 20, 2013:

- 9. COMMENT:** “A review of DEQ’s Revised BART Determination reveals a fundamental omission – while DEQ considered the cost of emissions control equipment over the life of the operating coal unit, it did not consider the cost of replacement capacity/energy for both units that is, of necessity, part of the plan.” The Attorney General’s comment goes on to specify that the revised BART determination should have considered the replacement cost associated with additional purchased-power and the additional costs that arise between the use of coal and the use of natural gas as a fuel source. In addition, the Attorney General’s comments state that PSO intends to submit an amended Integrated Resource Plant (“IRP”) to the Oklahoma Corporation Commission and that “[t]he stated purpose for the amendment is PSO’s updated need to serve approximately 250 MWs of load in the 2016 timeframe.” In regard to this issue, the comment concludes, “DEQ’s cost effectiveness determination is based on incomplete information and clearly underestimates the true costs of the proposal, and by extension, the cost effectiveness of the revised SIP.”

**RESPONSE:** In regard to comments related to consideration of replacement costs, please refer to Response to Comment No. 28. In regard to comment related to consideration of information in an IRP, please refer to Response to Comment No. 11.

- 10. COMMENT:** The Attorney General’s comments state that, arguably, the proposed SIP revision is more stringent than the FIP and, as a result, the revised SIP should have included an Economic Impact and Environmental Benefit Statement pursuant to 27A O.S. § 1-1-206.

**RESPONSE:** The requirements related to an Economic Impact and Environmental Benefit Statement (“EI/EBS”) under 27A O.S. § 1-1-206 apply to permanent rulemakings. Since the proposed SIP revision does not include a permanent rulemaking, these provisions do not apply. The permanent DEQ rules specifically related to the Regional Haze SIP may be found at OAC 252:100-8-70 through -78. These permanent rules were promulgated in 2007 and were approved with the portion of the Oklahoma Regional Haze SIP approved by EPA in December 2011. These permanent rules were determined to not be more stringent than the corresponding Federal rules and, consequently, no EI/EBS was prepared for those permanent rules. In any event, DEQ believes that the proposed SIP revision is not more stringent than the FIP.

**Letter from the Honorable Scott Pruitt, Attorney General of the State of Oklahoma,**  
received on May 15, 2013:

11. **COMMENT:** This comment also states that the DEQ's Revised BART Determination should have considered replacement costs and is incomplete because of the possibility of an amended 2012 IRP. The comment also includes the statement that an EI/EBS should have been included with the proposed SIP revision. The letter concludes with a request that the public hearing scheduled for May 20, 2013, be delayed until PSO's amended IRP could be vetted in proceedings at the Oklahoma Corporation Commission.

**RESPONSE:** In regard to the portion of the comment related to consideration of capacity and energy replacement costs, please refer to Response to Comment No. 28. In regard to the portion of the comment related to an EI/EBS, please refer to Response to Comment No. 10. As for the requested delay, the decision was made to proceed with the public hearing as scheduled. The purpose of the hearing was to solicit public comment, and to provide an opportunity for any new information (including relevant information related to the cost effectiveness analysis) to be submitted and considered in the final decision making process. Also, in the settlement agreement referred to in the comments, the Oklahoma Secretary of Environment agreed to submit a final proposed SIP revision to EPA for review and approval by June 18, 2013. Any unnecessary delay of the scheduled hearing would prevent that deadline from being met. In addition, the potential new information described in the request does not appear to be directly related to the type of information permitted to be considered in developing a Regional Haze SIP (*see* Response to Comment No. 28 for further detail); instead, the described information appears to be more directly related to proceedings before the Oklahoma Corporation Commission. Since the Oklahoma Corporation Commission has stayed the proceedings related to the costs associated with these environmental compliance measures until EPA makes a final decision on the proposed SIP revision, avoiding unnecessary delay in the SIP development process would likely result in the information being considered by the appropriate agency and in the appropriate forum in a more expeditious manner. (*See* Response to Comment No. 28 for further detail).

**American Electric Power** - Letter received on May 17, 2013 from Janet J. Henry, Deputy General Counsel

PSO's comments addressed statements included in a recent request (letter to the DEQ Executive Director dated, May 15, 2013) by Attorney General Pruitt's office to delay the hearing scheduled for Monday, May 20, 2013.

12. **COMMENT:** "That request urges ODEQ to re-evaluate the revised RH-SIP based on changes in PSO's load profile and cost of replacement power necessary to offset the retirement of one Northeastern coal-fired unit in 2016. However, the BART analysis ODEQ is required to undertake is a narrowly focused analysis that looks only at the relative cost of environmental controls on the BART-eligible units, and ODEQ's selection of the alternative that represents the 'best available retrofit technology' for those units, as defined in the Clean Air Act. While ODEQ has the discretion to consider costs associated with the energy demands of control equipment, and other non-air environmental impacts associated with the operation of particular control devices in its analysis of the most cost-effective option to address the visibility concerns that are the focus of the regional haze program, ODEQ does not have the authority or the expertise to

evaluate replacement resources or the adequacy of PSO's full complement of resources to meet customer demand.”

**RESPONSE:** DEQ concurs.

13. **COMMENT:** “PSO regularly evaluates and reports to the Oklahoma Corporation Commission on its resources plans, and, as noted in the letter, has announced its intention to submit a revised resource plan to the Commission in the near future. That revised resource plan will not provide any other relevant information to ODEQ that is necessary in order to complete its evaluation of the revised RH-SIP. Nothing in that plan will alter the relative costs of the various emission control options studied in the BART analysis submitted by PSO, or ODEQ's evaluation of the costs, energy impacts, and visibility improvements associated with the various alternatives studied. Accordingly, there is no reason to delay the public hearing or to defer any decision on the adequacy of the revised RH-SIP developed by ODEQ.”

**RESPONSE:** DEQ concurs that it is appropriate to proceed with the public hearing and the proposed SIP revision submittal as scheduled (*see* Response to Comment No. 11 for further detail). In regard to the remaining portion of the comment, no response is necessary.

14. **COMMENT:** “The letter also claims that it is ‘arguable’ that the revised RH-SIP is more stringent than the previously issued EPA FIP. However, there is no evidence that the revised SIP would impose more stringent emission reduction requirements than the current FIP. The primary focus of the revised RH-SIP for Northeastern Unit 3 and Northeastern Unit 4 is the choice of BART controls for SO<sub>2</sub> emissions. Under the FIP, each Northeastern Unit would be required to meet a 0.06 #/mmBtu emission rate. EPA's basis for meeting this limit is the installation of high-efficiency dry scrubbers on both units by January 2017. Under the SIP, one Northeastern Unit will retire and the other will be equipped with a dry sorbent injection system that is capable of achieving a 0.4 #/mmBtu emission rate. This rate is clearly a compromise between the 0.65 #/mmBtu rate that was included in the prior RH-SIP and the rate approved in the FIP. As demonstrated in the Revised BART Determination (at page 11) the revised RH-SIP reduces SO<sub>2</sub> emissions by approximately 24,888 tons per year while the FIP would reduce emissions by approximately 29,119 tons per year. However, the cost per ton of SO<sub>2</sub> reduction under the RH-SIP is \$1,005 per ton, while the cost per ton of SO<sub>2</sub> reductions under the FIP is \$1,544 per ton. The incremental cost to achieve the additional 4,231 tons of reductions under the FIP is \$4,718 per tons, and would not result in any perceptible improvement in visibility. As demonstrated in the Revised BART Determination, the revised RH-SIP is effective, but more moderate and cost-effective approach to visibility improvement than the currently approved FIP.”

**RESPONSE:** DEQ concurs that the proposed SIP revision is not more stringent than the FIP.

15. **COMMENT:** PSO urged the ODEQ, after careful evaluation of the comments submitted during the public comment period, to promptly finalize the revised RH-SIP.

**RESPONSE:** DEQ acknowledges the comments in support of the propose SIP revision.

**Carrie Dickerson Foundation/Sierra Club Prepared Hearing Statement** – Written statement submitted at the public hearing by Mr. Bob Rounsavell, President of the Carrie Dickerson Foundation and Sierra Club member

16. **COMMENT:** “The agreement will bring about environmental benefits resulting in significant health benefits.” “ODEQ should approve the PSO plan. It’s cleaner, it will support Oklahoma jobs, and it will keep ratepayer money close to home.” “This plan is a necessary start to improving air quality for the future.”

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

**Chesapeake Energy Corporation** – Letter received via email from Jamie Maddy, Director - Regulatory

17. **COMMENT:** The comment states that the First Amended Regional Haze Agreement is BART-compliant and significantly and affordably addresses regional haze with substantial environmental benefits. Accepting this proposal for submission to EPA allows PSO to plan for compliance and address its needs as well as the needs of the ratepayers.

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

18. **COMMENT:** “The First Amended Regional Haze Agreement provides an Oklahoma-centered solution by leaning on Oklahoma resources to reduce power plant emissions and provide reliable electricity.” “EPA has acknowledged that greater utilization of cleaner burning natural gas is a means for both PSO and OG&E to meet their BART obligations under federal law.” “This First Amended Regional Haze Agreement will, in part, result in greater utilization of natural gas and consequently, will have a positive impact on Oklahoma’s economy.” “Oklahoma’s Energy Plan calls for a strategy that increases reliance on Oklahoma resources for power generation which, according to the plan, helps preserve Oklahoma’s relative low cost of energy and electricity while simultaneously strengthening the economy.”

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

19. **COMMENT:** “Chesapeake supports the adoption of the First Amended Regional Haze Agreement.”

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

**Devon Energy Corporation** – Letter dated May 20, 2013 from William F. Whitsitt, Ph.D., Executive Vice President, Public Affairs

- 20. COMMENT:** “Devon Energy Corporation supports the settlement between Public Service Company of Oklahoma (PSO) and the U.S. Environmental Protection Agency (EPA) addressing the Revision to the Regional Haze State Implementation Plan. Devon requests that the Oklahoma Department of Environmental Quality approve the settlement.”

“This settlement allows Oklahoma to retain state control and primacy over air regulation. It is also based on the benefits of natural gas, a clean fuel produced locally.”

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

**Vaught & Conner, PLLC, on behalf of Dogwood Energy Corporation, LLC** – Letter dated May 20, 2013 from Cheryl A. Vaught

- 21. COMMENT:** “The SIP Revision is consistent with the State of Oklahoma’s energy plan. The state energy plan prioritizes the increased use of Oklahoma’s energy resources such as wind and natural gas, and protection of public health and the environment.”

**RESPONSE:** No response is necessary.

- 22. COMMENT:** “Transitioning from coal to gas, wind, energy efficiency, and demand response also has significant benefits for the overall reliability of the grid.” “The switching [to natural gas] option would result in plants better suited to integrate with variable wind generation . . . .”

**RESPONSE:** DEQ acknowledges the information concerning the electricity generation industry provided by Dogwood.

- 23. COMMENT:** “Dogwood supports the SIP Revision and urges DEQ to promptly move forward.”

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

**INCOG** – Letter dated May 17, 2013 from Nancy Graham, Air Quality Program Manager

- 24. COMMENT:** “The proposed Regional Haze Revised State Implementation Plan (RH SIP) will dramatically reduce the facilities’ short and long term emissions through the use of [BART]. Consequently, these SO<sub>2</sub> and NO<sub>x</sub> reductions are expected to have a positive impact in reducing ground-level ozone and particulates in the Tulsa metropolitan area.”

**RESPONSE:** DEQ concurs.

- 25. COMMENT:** “This Revised RH SIP is the product of initiative, cooperation and common sense. The plan provides a reasonable approach to achieve lower emissions, to meet both RH guidelines and federal Mercury and Air Toxics Standard (MATS), and to provide for additional scheduled emissions reductions.”

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

**Oklahoma Industrial Energy Consumers (OIEC)** – Letter dated May 17, 2013 from Thomas P. Schroedter, Executive Director

26. **COMMENT:** “The underlying Agreement. The Proposal is based upon, and is intended to implement, a settlement agreement ("Agreement"). [Proposed] Regional Haze Implementation Plan Revision, p. 4 (Mar. 20, 2013). That Agreement was executed on behalf of the State of Oklahoma by Gary L. Sherrer, Secretary of the Environment for the State of Oklahoma (the "Secretary"). The Secretary has certain limited statutory duties, and such other duties as designated by the Governor. 27A O.S. §1-2-101 (2011). Binding the State by entering into settlement agreements is not a statutory power of the Secretary, nor could it be considered an implied power necessary to an efficient exercise of his limited express duties. *Strong v. Police Pension and Retirement Bd.*, 115 P. 3d 889, 893 (Okla. 2005). Accordingly, unless the Secretary has some written authority from the Governor authorizing him to enter into settlement agreements binding the State, which writing would have to have been issued prior to October 1, 2012, the date the Secretary executed the Agreement, the Agreement is an *ultra vires* act of the Secretary and hence void. See, *Canning v. NLRB*, 705 F. 3d 490,513-14 (CADDC 2013). If the Agreement is void, DEQ should withdraw the Proposal, because it no longer has any basis.”

**RESPONSE:** The proposed SIP revision is based on the Supplemental BART Determination Information submitted by PSO and the First Amended Regional Haze Agreement entered into by PSO and DEQ. The application appears to meet the relevant requirements and, therefore, DEQ prepared the proposed SIP revision, including the revised BART determination. The proposed SIP revision is not dependent on the existence of the settlement agreement referenced in this comment and the settlement agreement is not a necessary component of a SIP revision. The purpose of referencing the settlement agreement in the proposed SIP revision was only to provide nonessential background. To the extent the settlement agreement was referenced elsewhere in the draft proposed SIP revision, the reference should be to the First Amended Regional Haze Agreement included as Appendix III-1. DEQ believes that the required elements of a Regional Haze SIP revision are satisfied regardless of whether the settlement agreement is considered. In any event, on March 30, 2011, Governor Mary Fallin designated the Oklahoma Secretary of Environment, Gary Sherrer, as her designee for State Implementation purposes.

27. **COMMENT:** “Shut down cannot be BART. BART ‘means an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by an existing stationary facility.’ 40 C.F.R. §51.301. Simply put, BART is defined to constitute the available retrofit technology which is expected to be most cost effective and most effective in reducing air emissions and improving visibility for certain existing stationary sources. EPA’s BART Guidelines provide that BART cannot be conversion of an existing coal plant to natural gas (40 C.F.R. Part 51, Appendix Y, §IV(D)(3) and (5)), because conversion is not ‘retrofitting.’ See also, 76 Fed. Reg. 81750 (Dec. 28, 2011). For similar reasons, mandating the early retirement of a generating facility to achieve emissions

reductions also cannot be BART. Not only would there be no ‘retrofit’; there would cease to be ‘an existing stationary facility.’ Accordingly, the Proposal, which requires retirement of the Units years before the end of their useful operating lives, cannot be adopted as BART.”

**RESPONSE:** BART is primarily an emission control program, but is not exclusively a retrofit technology program, given the requirement to review pollution prevention options in the BART guidelines. PSO developed a long-term multi-media, multi-pollutant targeted plan and proposed this for consideration in the revised BART determination. Nothing prohibits the State from considering the emissions reductions attributable to strategic business decisions in the evaluation of BART.<sup>2</sup>

The language in the SIP has been modified to state that the revised BART determination relies on the Supplemental BART Determination Information submitted by PSO and made enforceable in the First Amended Regional Haze Agreement. With this change, the SIP language has been modified to clearly reflect the distinction between the BART determination and the additional emission reductions from a unit retirement relied upon to come to that determination. The remaining efforts – decreasing capacity utilization and an additional unit retirement (from PSO’s long-term multi-media, multi-pollutant plan) – were considered in the further reasonable progress assessment. However, the (revised) BART determination does not mandate unit retirements.

In the context of a BART review, the remaining useful life of the source is established by the company (PSO).<sup>3</sup> However, for the company to take credit for the emission reductions inherent in the shutdown of the unit, “this date should be assured by a federally- or State-enforceable restriction preventing further operation.”<sup>4</sup> In order to afford PSO the opportunity to take credit for the emission reductions from the proposed shutdown, the date of the shutdown had to be included in an enforceable administrative order.

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<sup>2</sup> Under 40 CFR Part 51, Appendix Y Section IV(D)(1) 3, EPA discusses the review of pollution prevention options with the caveat that “it is not our intent to direct States to switch fuel forms, e.g. from coal to gas.” [From the context of the comment, it appears that the commenter’s intended reference was to §IV(D)(1) 3 and 5, rather than §IV(D)(3) and (5).] This is not a prohibition on considering a fuel switch proposed by a company. The fact that EPA cites this language in their response to comments (76 Fed.Reg. 81750 (Dec. 28, 2011) on why a fuel switch was not mandated in the FIP is understandable. It is reasonable that EPA not impose the requirement in the Oklahoma FIP where they have indicated no intent to require the States to do so.

<sup>3</sup> See 70 Fed.Reg. 39169 (July 6, 2005).

<sup>4</sup> *ibid.*

28. **COMMENT:** “Even assuming, *arguendo*, that mandating the early retirement of the Units could be considered as part of a BART proposal, it was error to not consider certain important ‘costs of compliance’ as required by applicable regulations. 40 C.F.R. §51.301 (definition of BART). These omitted compliance costs include: a) the cost of replacement capacity and energy arising from the mandated retirement of one of the Units in 2016; b) the cost of replacement energy arising from the capacity restrictions which are imposed on the second Unit during the period 2021-2026; and c) the cost of replacement capacity and energy arising from the mandated retirement of the second Unit no later than 2026.”

**RESPONSE:** As discussed in the Response to Comment No. 27, DEQ did not mandate shutdown or capacity restrictions on either unit. PSO proposed the planned activities in their application submitted (consistent with the settlement agreement) as a revision to PSO’s previous submittal under OAC 252:100-8-76. DEQ entered into an administrative order with PSO to make the planned activities enforceable and therefore eligible to be relied upon in the BART review. It is DEQ’s responsibility to review the environmental impact and control technology selection of the project. In the BART guidelines,<sup>5</sup> EPA outlines the criteria to be considered in evaluating the costs of compliance. These costs and supporting methodologies, center on the control technology selection. There are no provisions providing for the evaluation of costs associated with voluntary measures, such as the unit retirements and capacity restrictions proposed by PSO. While it is appropriate to consider the visibility improvement resulting from these actions, it is inappropriate to consider the costs associated with any such replacement. Stated otherwise, the cost effectiveness review included in the BART determination is with respect to the cost of controls only and not the cost of a replacement unit or capacity. DEQ took into consideration the cost of compliance, and the energy and non-air quality environmental impacts of compliance. To the degree that utility rates may be impacted, the evaluation of costs associated with a replacement unit or capacity are under the jurisdiction of the Oklahoma Corporation Commission.

It should be noted that in testimony before the Oklahoma Corporation Commission, PSO discussed the decision to bring this proposal forward identifying known and anticipated future regulatory requirements for the facility. PSO proposed the retirement dates and capacity restrictions as the most effective way to address Regional Haze requirements and ensure compliance with the Mercury and Air Toxics Standards (MATS). PSO also took under consideration: the proposed Coal Combustion Residuals (CCR) Rule, which could require conversion of wet ash disposal systems to dry landfill systems, the possible relining or closing of ash ponds, as well as the possible construction of waste water treatment facilities; the proposed Clean Water Act “316(b)” rule, which establishes technology standards for the design and operation of cooling water intake structures at existing electric generating facilities; and future revised NAAQS for particulate matter and ozone. The comment, in focusing on cost effectiveness of SO<sub>2</sub> removal and visibility improvement attempts to place the burden of justification for PSO’s long term multi-media, multi-pollutant targeted approach solely on compliance

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<sup>5</sup> See 40 CFR Part 51, Appendix Y.

with one environmental program and ignores the costs associated with compliance with these other regulatory requirements.

29. **COMMENT:** “Visibility/Greater Reasonable Progress Evaluation. It has not been demonstrated that the proposal meets the requirement that approvable alternatives to BART must achieve greater reasonable progress than would be achieved through the installation and operation of BART (i.e., the DFGD retrofit option). 40 C.F.R. § 51.308(e)(2)(i). In fact, on page 11 of the Revised BART Report, it is acknowledged that the DFGD option ‘would provide improvements in visibility above that achieved with the DSI system’ but argues that such improvements would not be perceptible. This conclusion clearly indicates that the Proposal does not meet the greater reasonable progress standard with regard to visibility improvement.”

**RESPONSE:** The regulation cited, 40 C.F.R. §51.308(e)(2)(i), addresses alternative measures States may opt to implement or require participation in rather than to require sources subject to BART to install, operate, and maintain BART. The revised SIP under review is not a proposal for an alternative to BART, it is the revision and resubmission of the State’s BART determination for the PSO Northeastern Power Station; therefore, the cited reference does not apply.

DEQ has the authority to revise the SIP as necessary. When presented with a long-term multi-media, multi-pollutant targeted proposal, which provided a definitive lifespan for the two coal-fired boilers at the Northeastern Power Station, it was appropriate for the State to reopen and review the BART determination. The BART determination as described in the proposed SIP revision, while crediting the facility for all reductions inherent in the multi-media, multi-pollutant targeted approach, provides a more cost effective control technology given the defined lifespan of the units than the BART determination contained within the FIP. It is not necessary that the BART determination in the proposed SIP revision achieve greater visibility improvement than the determination within the FIP, since it is not a “Greater Reasonable Progress Alternative Determination” under 40 C.F.R. §51.308(e)(2). It is only necessary that the BART determination be compliant with the five factor analysis under 40 C.F.R. §51.308(e)(1) and Appendix Y.

30. **COMMENT:** “In addition, a significant portion of the emissions reductions attributed to the Proposal could also be achieved by switching to ultra-low sulfur coal (as recommended by DEQ’s original SIP) and by installing DSI control technology to meet requirements of the MATS rule, which would be necessary by 2016 even if the Proposal did not exist. For example, by simply switching to ultra-low sulfur coal PSO could reduce total forecasted SO<sub>2</sub> emissions on its system by approximately 33%, while the addition of DSI controls, which is required by MATS, produces approximately 67 thousand tons (6.4%) of the total forecasted SO<sub>2</sub> removal attributed to the Proposal. The DSI emission reductions cannot be used to achieve greater reasonable progress because it must be: ‘demonstrat[ed] that the emission reductions resulting from the emissions trading program or other alternative measure will be surplus to those reductions resulting from measures adopted to meet requirements of the CAA as of the baseline date of the SIP.’ 40 C.F.R. § 51.308(e)(2)(iv) (emphasis added).”

“By including emissions reductions arising from DSI and by ignoring reductions which could be achieved through switching to ultra-low sulfur coal, the Proposal overstates the emissions reductions due to the Proposal which are surplus to reductions that were achievable through other control measures or by implementing measures to meet CAA requirements that existed as of the baseline date of the revised SIP.”

**RESPONSE:** As previously stated, the proposed SIP revision under review is a revision and resubmission of the State’s BART determination for the PSO Northeastern Power Station and is not a proposal for an alternative to BART; therefore, greater reasonable progress is not an issue. Further, installation of the DSI control technology to satisfy the BART requirements will provide confidence that the facility will also be able to meet the requirements of the MATS rule. It is not accurate that a significant portion of the emissions reductions attributed to the “Proposal” can be achieved with ultra-low sulfur coal and DSI. Over the same time period, April 16, 2016 through December 31, 2026, the proposed SIP revision would result in the removal of approximately 65,000 tons more SO<sub>2</sub> than the scenario outlined in the comment.<sup>6</sup>

- 31. COMMENT:** “Also, any alternative to BART must require that: ‘all necessary emission reductions take place during the period of the first long-term strategy for regional haze.’ 40 C.F.R. §51.308(e)(2)(iii). The first long-term strategy period ends in 2018. However, the Proposal fails to meet this requirement, because the level of SO<sub>2</sub> emissions under the Proposal is expected to be significantly higher than emissions under the DFGD alternative until well after 2018. SO<sub>2</sub> emissions will only be lower when the second Unit is retired. The SO<sub>2</sub> emission rate for DSI (estimated at 0.4 pounds per MMBtu) is six point six times the forecasted emission rate of the Units (0.06 pounds per MMBtu) with DFGD control technology.”

“Accordingly, the Proposal cannot be adopted as a formal alternative to BART, and it should be withdrawn.”

**RESPONSE:** As previously stated, the proposed SIP revision under review is a revision and resubmission of the State’s BART determination for the PSO Northeastern Power Station, and is not a proposal for an alternative to BART. For more detail, please see Response to Comment No. 29.

- 32. COMMENT:** The comment questions the assertion on page 12 of the Revised BART Report that it expects cumulative SO<sub>2</sub> and NO<sub>x</sub> emissions from the Units to be approximately 36% of the emissions level that would result from the DFGD retrofit option. Underlying details of the analysis supporting the above assertion were not

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<sup>6</sup>This response assumes the commenter used a 0.6 lb/MMBtu SO<sub>2</sub> emission rate for ultra-low sulfur coal to arrive at the asserted 33% reduction in the comment. DSI control efficiencies are dependent on many site-specific considerations. Removal efficiencies can range from 30% to 70% for SO<sub>2</sub>. It is reasonable to assume that DSI would have a lower control efficiency for ultra-low sulfur coal; however, for this comparison it was assumed that the DSI could achieve a 50% control efficiency and that the facility would have no capacity restrictions under the scenario proposed in the comment. Emission calculations for the DEQ alternative are documented in the revised BART determination.

provided with the Revised BART Report. Absent back-up documentation, that assertion is unreliable and cannot be used to justify the Proposal.

**RESPONSE:** All assumptions relied upon were available in the determination. In EPA's assessment of the cost effectiveness of the DFGD retrofit option, the capital recovery factor used to establish the annualized costs assumed a lifespan of 30 years. This is referenced on page 6 of the revised BART determination. Since the FIP does not restrict capacity utilization, no such restrictions were assumed in this calculation. The mass of emissions attributable to the EPA FIP is a simple multiplication of the emission rate – found in Tables 2 (for NO<sub>x</sub>) and 8 (for SO<sub>2</sub>) of the revised BART determination – and full load heat input (see Table 9), and continuous operation for 30 years. The assumptions for the corresponding emission calculations under the agreement can be found in Tables 2 and 3 of the revised BART determination. Minor differences in calculations can arise through rounding and whether emissions in 2016 are prorated by remaining months or days.

While the revised BART determination does not significantly rely on this particular calculation, it provides a reasonable tool for comparing the results of the FIP with those of the long term multi-media, multi-pollutant targeted proposal.

33. **COMMENT:** “In addition, the Proposal ignores the additional NO<sub>x</sub> emissions that would be produced by gas-fired generation or purchased power sources that PSO would have to acquire to replace the Units after they are retired in 2016 and 2026. Finally, it was assumed that, if DFGD retrofitted, the Units would operate for another 30 years (i.e., until 2046). There is no support for this assumption. In fact, PSO has stated in testimony in OCC Cause No. PUD 201200054 that it expects the Units would likely be retired by 2030 (i.e. 13 years after DFGD retrofits are implemented). If the emissions analysis was adjusted to reflect a shorter remaining operating life of the Units, consistent with PSO's own forecast, and to account for NO<sub>x</sub> emissions produced from sources that replace the Units, the estimated emissions reduction attributable to the Proposal would likely be eliminated.”

**RESPONSE:** As discussed in Response to Comment No. 28, replacement energy is not a component of a BART review. However, staff notes that any replacement energy is unlikely to be procured from a source with environmental impacts comparable to or greater than those of the two existing coal-fired units under review. In establishing the requirement for BART, the Clean Air Act required the states to address a specific group of existing large-emitting sources that were placed in operation before many of the current national air quality programs were in place. Replacement energy would likely come from a source that is subject to either a BART review itself, or an environmental impact review through the Prevention of Significant Deterioration (PSD) program. Any in-state or out-of-state sources of replacement energy would also be subject to scrutiny regarding their potential visibility impacts on any Class I area.

Adequate support for the analyses' assumption of a 30-year life-span for the controls and units under the FIP scenario is provided in the revised BART determination, PSO's Supplemental BART Determination Information, and EPA's Technical Support

Document (TSD) published with the FIP. DEQ does not concur with the comment's concluding presumption that a shorter remaining operating life of the Units would negate emissions reduction attributable to the Proposal. It should be noted that a shorter operating life for the DFGD retrofits under the FIP scenario would decrease the cost-effectiveness of these controls.

34. **COMMENT:** "The BART analysis is based on outdated planning assumptions. The BART analysis supporting the Proposal is based on PSO long-term planning studies that are no longer valid. On April 9, 2013, the Company announced to the OCC that it will have to update its Integrated Resource Plan ('IRP') to reflect previously unanticipated increases in near-term peak demand due to recent significant growth in oil and gas production activities on its system. These changes will increase replacement costs for the Units and also increase future SO<sub>2</sub> and NO<sub>x</sub> emissions on PSO's system, and thereby could significantly alter results of the BART analysis supporting the Proposal. Due to these material changes, DEQ's current BART analysis is no longer valid and therefore needs to be revised once PSO's updated IRP is completed and approved by the OCC later this year."

**RESPONSE:** As discussed in the Response to Comment No. 28, replacement energy is not a component of a BART review. The BART determination relies upon the Supplemental BART Determination Information submitted by PSO, and the terms and conditions in the First Amended Regional Haze Agreement. Accordingly the Regional Haze Agreement provides that: (1) the facility will shut down one of the affected units (either Unit 3 or 4) by April 16, 2016; (2) the facility will install and operate a dry sorbent injection ("DSI") system on the remaining unit to meet an emission standard of 0.40 lb/mmBTU or less from April 16, 2016 to December 31, 2026; and (3) the facility will incrementally decrease capacity utilization for the remaining unit between 2021 and 2026, and will shut down the remaining unit no later than December 31, 2026. This agreement is with PSO for two boilers at the Northeastern Power Station. For further response, please refer to Response to Comment No. 11.

35. **COMMENT:** "Ratepayer Impacts have been ignored. The Proposal completely ignores the potentially devastating impact of the Proposal on PSO's ratepayers, presumably because EPA doesn't consider such impacts relevant in a BART analysis. However, as we have shown herein, the Proposal cannot be BART or a formal BART alternative. In that context, EPA has recognized that utility companies can consider 'any potential impact on rates.' 76 FR 81749 (Dec. 28, 2011). See also, 27A O.S. 2-5-107(4) (2011) (economic impacts are to be considered). Accordingly, the potentially devastating impact of the Proposal on PSO's ratepayers must be considered here. Evidence presented by PSO in OCC Cause No. PUD 201200054 indicates that the Proposal may significantly increase costs to ratepayers. Parties have presented testimony in OCC Cause No. PUD 201200054 to the effect that the Proposal could increase rates by 15% to 19% in 2016, and that future rate increases due to the Proposal are expected to be much larger. Moreover, PSO's own analysis in OCC Cause No. PUD 201200054 indicates that the costs to ratepayers are expected to be approximately \$1.9 billion higher under the Proposal than they would be under the DFGD retrofit alternative over the 2016-2040 period. This independent analysis by PSO further confirms that the Proposal is not cost effective when compared to the

DFGD alternative. Moreover, estimates presented by OIEC in testimony presented in OCC Cause No. PUD 201200054 indicate that the Proposal could be approximately \$5 billion more costly to ratepayers than the low sulfur coal alternative which was designated by DEQ as BART in its original SIP.”

**RESPONSE:** The *Federal Register* reference cited, 76 Fed.Reg. 81749 (Dec. 28, 2011), addressed the company’s freedom to reduce emissions by alternative methods so long as the BART determined emission limit is met, “emission limits may also be met with reconfiguration of the units to burn natural gas, the companies themselves are free to determine whether this option best responds to future customer needs and preferences, including any potential impact on rates.” This statement remains true within the restrictions imposed by the Regional Haze Agreement.

The statute referenced in the comment, 27A O.S. § 2-5-107(4), only applies to the considerations required by the Air Quality Advisory Council in deciding whether to recommend a rule or rule amendment to the Environmental Quality Board. Since the revised BART determination is not a rule, § 2-5-107(4) does not apply. For a similar discussion, see Response to Comment No. 10.

As identified in the comment itself, a utility company’s long term plans and issues related to utility rates are under the purview of the Oklahoma Corporation Commission.

- 36. COMMENT:** In summary, the basis for the Proposal may be void, the Proposal impermissibly mandates retirement of the Units, it is approximately \$242 million per year more costly than the existing BART (DFGD retrofit) alternative, would result in higher SO<sub>2</sub> emissions and lower visibility, and is forecasted to result in much larger rate increases than the DFGD retrofit option. The cost of the Proposal is also far higher than the ultra-low sulfur fuel switch alternative which DEQ determined to be BART in the original SIP and is approximately three to eight times the cost of BART proposals approved by EPA for other coal plants. Accordingly, the Proposal does not meet the criteria established by the EPA for approval as BART, or as an alternative to BART, and it is not in the interest of PSO's ratepayers. The Proposal should, therefore, be withdrawn.

**RESPONSE:** This comment summarizes concerns that have been addressed in Responses to Comments Nos. 26 through 35. DEQ believes that the Proposal meets the criteria established by the EPA for approval as BART.

**Office of the Secretary of Energy, State of Oklahoma** – Letter received via email on May 20, 2013 from James P. Albert, Deputy Secretary of Energy

- 37. COMMENT:** “Understanding that mitigation options for these rules [Regional Haze and EPA’s Mercury and Air Toxics Standards (MATS)] are inextricably intertwined, the Governor encouraged a holistic and reasonable state-based compliance strategy.”

“[T]he EPA, the U.S. Department of Justice, PSO, and the State of Oklahoma ... worked diligently to ensure that the agreed upon compliance strategy would provide greater regulatory certainty by ensuring compliance with both Regional Haze and MATS, and

that this could be accomplished by mitigating costs to consumers. Notably this course of compliance offers greater flexibility regarding thresholds for emissions reductions, it significantly eliminates the risk that substantial capital costs will be passed along to ratepayer if investments are made in compliance technologies that are later deemed insufficient for addressing future environmental regulations, and it protects Oklahoma's environment and the health of Oklahoma citizens. And this all made possible greater reliance on Oklahoma's native resources, which are creating local jobs and support local economies."

"The settlement agreement offers the 'lowest, *risk-adjusted* reasonable cost option for compliance' and offers promise for future compliance as well with far lower capital risk. Inaction, which would place ratepayers, system reliability, and Oklahoma's environment at risk, simply cannot be an option."

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

**Office of the Secretary of Environment, State of Oklahoma** – Letter dated May 20, from Gary Sherrer, Secretary of Environment

- 38. COMMENT:** "This Oklahoma-based plan and the resulting SIP were carefully crafted and vetted to be in both technical and legal compliance with the Clean Air Act and to serve as the replacement for the FIP. This SIP allows for compliance, while also putting AEP/PSO on a path that works best for them and their customers. In addition to meeting Regional Haze requirements, the settlement agreement also is designed to bring AEP/PSO into compliance with the Mercury and Air Toxics Rules and various other air rules."

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

**Oklahoma Sierra Club** – Comments submitted at the public hearing by Jody Harlan, Chair

- 39. COMMENT:** Ms. Harlan expressed support for this option [the proposed revision of BART] because it is more cost effective than retrofitting coal units with expensive scrubbers. Continuing to run the outdated, aging plants until 2041 would raise rates for residential customers by 14.3% compared to a projected 11% under PSO's cost-effective plan.

**RESPONSE:** DEQ acknowledges the information provided.

- 40. COMMENT:** "Dangerous sulfur dioxide emissions from the Northeastern power plant near Oologah will be reduced by more than half in 2016 and fully eliminated by 2026."

"Oklahomans' health will benefit from cumulative reductions in carbon dioxide, the primary cause of climate disruption, and sulfur dioxide, mercury, nitrogen oxides and other toxins."

**RESPONSE:** DEQ acknowledges the information provided.

41. **COMMENT:** “The proposed SIP revision for the AEP-PSO Northeastern Units 3 and 4 avoids the risks of expensive investments in outdated technology. It allows AEP-PSO flexibility in transitioning to cleaner energy sources over a reasonable period of time. And it enables Oklahoma to comply with federal regulatory safeguards while ensuring that we will have a cleaner energy future.”

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

**Quality of Service Coalition (QOSC) – Letter dated May 20, 2013 from Lee Paden, Attorney for Quality of Service Coalition**

42. **COMMENT:** “ODEQ is required to consider and address the anticipated net effect on visibility resulting from changes projected in point, area, and mobile source emissions by 2018. As explained on Page 91 of the Regional Haze Implementation Plan Revision, February 2, 2010, the changes anticipated to occur will result from population growth, land management evolution, air pollution control, and development of industry, energy and natural resources. There is no indication in the most recently filed [Proposed] Regional Haze Implementation Plan Revision, March 20, 2013, that ODEQ used modeling data that contains updated emissions inventory data. To establish emissions in 2018 from the 2002 inventory, ODEQ, using CENRAP modeling expertise, developed an estimated inventory for 2018. QOSC respectfully suggests that the use of data that is outdated is inappropriate, requires additional data be supplied and would suggest that more current emission inventory data be used in modeling of regional haze in 2018. The use of new data inserted in the CENRAP model and the results of new modeling information will provide ODEQ and EPA information required by regional haze statutes and rules.”

“Only recently EPA noted that Arizona Department of Environmental Quality failed to provide the most recent emissions inventory available as required by the Regional Haze Rule in 40 CFR 51.308(d)(4)(v), in addressing it [sic] updated Regional Haze submission. Arizona subsequently provided the 2008 emissions inventory. ODEQ should also be required to provide the most recent emissions inventory available to use in creating an estimated inventory for 2018. An updated emissions inventory is essential to the overall determination of BART-eligible sources in Oklahoma and to the determination of sources required to install BART.”

**RESPONSE:** The regional photochemical modeling conducted in support of the initial SIP was not updated for the SIP revision,<sup>7</sup> because individual BART determinations do not rely on the regional photochemical modeling conducted in cooperation with

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<sup>7</sup> The proposed SIP revision opens and revises only the disapproved portions of the original SIP revision, and only as they relate to the SO<sub>2</sub> BART Determination for AEP/PSO Northeastern Units 3 and 4. Those portions include the BART chapter (Chapter VI), the Long-term Strategy with Emission Reduction (Chapter VII), the BART Application Analysis (Appendix 6-4) for AEP/PSO Northeastern Units 3 and 4, and the Regional Haze Agreement (Appendix 6-5) for AEP/PSO. The proposed SIP revision also addresses the portions of Oklahoma’s Interstate Transport SIP disapproved by EPA because it relied on the original BART Determination for AEP/PSO’s Northeastern Units 3 and 4.

CENRAP. In fact, regional photochemical modeling conducted over 12 and 36 kilometer grid scales is not designed to be used for single-source analysis. Instead, EPA requires that the more conservative Gaussian puff model, CALPUFF, be used for the review of long range impacts (greater than 50 kilometers) of individual sources. The model was developed to support evaluations of individual sources on Class I areas and provides both visibility and concentration results. The contributions to visibility impairment from PSO's Northeastern Power Station were evaluated with CALPUFF in the revised BART determination, and an updated inventory would have no impact on the BART determination for the facility.

DEQ notes that while EPA did require Arizona to submit the most recent available Emissions Inventory (2008) as part of its original Regional Haze SIP submittal (78 Fed.Reg. 29292 (May 20, 2013), Arizona was not required to update the regional photochemical modeling using the 2008 Emissions Inventory. As required, DEQ submitted an up-to-date Emissions Inventory in Appendix 4-1 of the original Regional Haze SIP submittal. All requirements of the scheduled progress reports and updates under the Regional Haze Program will be met.

43. **COMMENT:** “Again, the [Proposed] Regional Haze Implementation Plan Revision filed on March 20, 2013, is inconsistent with the February 2, 2010, Regional Haze Implementation Plan Revision. On page 111, D. Factors for Consideration (1). Source Retirement and Replacement Schedules, ODEQ opined that it considered source retirement and replacement schedules developing its long-term strategy of emissions reductions. ODEQ concluded that it “cannot reliably predict the retirement or replacement of sources and consequently does not rely on source retirement to achieve any reasonable progress goal. Nothing in the [Proposed] Regional Haze Implementation Plan Revision provides the rationale or reasoning for ODEQ’s new position on retirement or replacement of sources. Even more interesting is the lack of any information in the March 20, 2013 document addressing replacement of retired generating facilities in 2016 or 2026.”

**RESPONSE:** Absent a federally or state enforceable mechanism to enforce an otherwise voluntary retirement, retirements cannot be dependably predicted or relied upon for the Reasonable Progress Goal planning discussed in Chapter IX of the original Regional Haze SIP submittal. The First Amended Regional Haze Agreement signed by PSO and DEQ provides an enforceable mechanism to allow contemporaneous emission reductions achieved through retirement to be relied upon within the context of the SIP’s implementation of BART requirements. This document is referred to and included in the appendices of the proposed SIP revision. For a response to the issue of replacement power, please see Response to Comment No. 28

44. **COMMENT:** “Reasonable progress goals require ODEQ to consider 5 factors in determining a reasonable progress goal. 42 U.S.C. Section 7491(g) (1) provides the five factors that must be considered in determining a reasonable progress goal:

1. Cost of compliance
2. Time necessary for compliance
3. Energy effects of compliance

4. Non-air quality environmental effects of compliance, and
5. Remaining useful life of existing sources

QOSC suggests that factor number 3, if considered at all, did not factor into its consideration the requirement for replacement energy and capacity as existing units are retired.”

**RESPONSE:** As indicated in the Response to Comment No. 43, this proposed SIP revision does not propose changes to the EPA-approved version of Chapter IX (Reasonable Progress Goals) of the original SIP revision; however, it does identify further reasonable progress actions which will certainly further these goals (relevant to the requirements of the Federal Clean Air Act (“CAA”) § 169A(g)(1), 42 U.S.C. § 7491(g)(1)). The revised BART Determination considers “the energy and non-air quality environmental effects of compliance” (CAA § 169A(g)(2), 42 U.S.C. § 7491(g)(2)). As recommended in 40 CFR Part 51, Appendix Y, Section IV.D, Step 4(h), this portion of the analysis focused primarily on energy requirements of the control technology, and followed an approach consistent with the statement in Step 4(h)(1): “Because energy penalties or benefits can usually be quantified in terms of additional cost or income to the source, the energy impacts analysis can, in most cases, simply be factored into the cost impacts analysis.”

Regarding consideration of the requirement for replacement energy and capacity as existing units are retired, please refer to Response to Comment No. 28.

- 45. COMMENT:** “Replacement energy for the 490 MW unit retired in 2016 must be immediately available upon retirement and the amount of replacement energy and costs associated with that replacement energy are readily quantifiable. These costs are necessary costs of compliance and without their inclusion in the review process, ODEQ cannot properly determine if the scheme of retirement suggested in the Settlement Agreement is acceptable.”

**RESPONSE:** See Response to Comments No. 28.

- 46. COMMENT:** Adopt by reference OIEC submitted comments.

**RESPONSE:** See Responses to Comments Nos. 26 through 36.

- 47. COMMENT:** This comment suggests that “the [Proposed] Regional Haze Implementation Plan does not meet statutory and regulatory requirements necessary for approval of this proposal. QOSC recommends its rejection. In the best interest of Oklahoma customers of PSO, the state of Oklahoma and all Oklahoma citizens, the proposal should be withdrawn by ODEQ.”

**RESPONSE:** No substantive deviations from the statutory or regulatory requirements applicable to the proposed SIP revision have been identified; consequently, the proposed SIP revision has not been withdrawn.

**Sierra Club** – Letter (and enclosure) received via email on May 20, 2013 from Elena Saxonhouse, Staff Attorney

**48. COMMENT:** “I write on behalf of Sierra Club and its 2.1 million members and supporters, including more than 3,000 members in Oklahoma, in strong support of the proposed Regional SIP Revision. The SIP fully complies with federal requirements to reduce regional haze and interstate pollution from the Northeastern coal-fired power plants in Oologah, Oklahoma. In addition to protecting scenic view in the region’s most treasured parks, the SIP’s requirement to retire one Northeastern unit by 2016, along with retrofits and steady ramp down of capacity at the other toward retirement in 2026, will have enormous public health benefits. It is also a more cost effective solution than requiring the installation of expensive scrubbers on both units. For these reasons, Sierra Club urges the Oklahoma Department of Environmental Quality (DEQ) to promptly approve and finalize the SIP.” The commenter also pointed out that the SIP Revision will conserve water resources and is consistent with the State Energy Plan.

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision. No additional response is necessary.

**49. COMMENT:** “The SIP Revision’s impact on the state’s dwindling water resources is also worth noting in light of the extreme drought conditions facing Oklahoma, and DEQ’s mandate to consider nonair environmental impacts. In response to Sierra Club data requests in proceedings before the Oklahoma Corporation Commission, PSO has estimated that the increase in water consumption at the Northeastern plant if it were to add dry scrubbers to both units would be at least 65 times greater than with a retrofit ACI and DSI at one unit pursuant to the SIP Revision.” The commenter provided, as Exhibit 1, Public Service Company of Oklahoma’s Response to Sierra Club’s Fifth Set of Data Requests, which stated that the controls pursuant to the EPA settlement will consume approximately 11,250 gallons of water per day, compared with the DFGD option, which would consume approximately 737,000 to 805,000 gallons of water per day for two units.

**RESPONSE:** The Revised BART determination took into consideration non air quality environmental impacts, including the estimated water requirement for proper operation of each control option.

**50. COMMENT:** “The state then has the discretion to choose the ‘best’ option, so long as it has considered the above factors consistent with the BART guidelines, and ‘provide[d] a justification.’ 70 Fed. Reg. at 39,170-71. For all the reasons, above, Sierra Club believes DEQ correctly and justifiably chose the alternative that provides for the gradual phase out of the Northeastern coal units. We enthusiastically support the SIP Revision and urge DEQ to promptly move forward with finalizing and implementing the rule.”

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision. No additional response is necessary.

**State Chamber of Oklahoma** – Letter dated May 20, 2013 from Fred S. Morgan, President and CEO

**51. COMMENT:** “The State Chamber of Oklahoma supports the state implementation plan (SIP) over the less desirable option of an EPA-designed compliance plan. Without the

SIP, the Public Service Company of Oklahoma (PSO) will be forced to comply with a federal implementation plan (FIP), which would inevitably come with a greater cost to Oklahoma rate payers – business and residential customers.”

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

**Susan Schmidt, Sierra Club member** – Comments submitted at the public hearing

- 52. COMMENT:** “It’s time we stop using coal. PSO needs to follow-through with the SIP to retire the Northeastern unit by 2016 as agreed and ramp up its plans to transition away from coal. It’s past time that all utility companies embrace clean energy.”

**RESPONSE:** DEQ acknowledges the comments in support of the proposed SIP revision.

**Trinity Consultants** – Comment submitted at public hearing by Jeremy Jewell, Principal

- 53. COMMENT:** Mr. Jewell provided a description of the technical analyses done by Trinity for PSO’s BART reevaluation. He provided a description of the modeling analyses conducted by Trinity for PSO. Regarding cost of control estimates prepared by Trinity, the commenter stated that EPA’s Control Cost Manual was used and PSO’s engineering cost estimates were presented for comparison purposes only. The results of the control cost evaluations show that the scenario presented in the proposed SIP revision is the most cost effective scenario that also achieves the necessary visibility improvement goal.

**RESPONSE:** DEQ acknowledges the information provided.

**Oklahoma Sierra Club** – Compilation of 380 Sierra Club members’ and supporters’ comments collected online, submitted via email on May 20, 2013, by Whitney Pearson, Associate Organizing Representative.

- 54. COMMENT:** The comment from each of the commenters expressed support for the proposal as a step in protecting and improving public health.

**RESPONSE:** DEQ acknowledges the comments in support of the proposed SIP revision.

**Citizens’ Comments** – Compilation of comments received via email May 16 – May 20, 2013

- 55. COMMENT:** David Brooke commented that he does not understand how PSO’s “alleged pollution” would affect the wildlife in southwest Oklahoma. He also expressed concern about adequate energy sources if coal plants are closed.

**RESPONSE:** The original Regional Haze SIP submittal documented, using appropriate and relevant data and modeling protocols, that BART-eligible units at PSO’s Northeastern Power Station cause or contribute to visibility impairment at the Wichita Mountains Wilderness Area and other Class I areas. As a result, those units became

subject to BART requirements, as described. Regarding concerns over availability of adequate energy sources, see Response to Comment No. 28.

- 56. COMMENT:** Steve Jackson – Does not want EPA and Sierra Club to raise his electricity rates.

**RESPONSE:** DEQ acknowledges the commenter’s concern over a possible increase in customers’ utility rates as a result of implementation of the proposed SIP revision. However, as discussed in the Response to Comment No. 28, this issue is not within the scope of DEQ’s review authority under the Regional Haze program.

- 57. COMMENT:** Bonnie and Jeff Brown – No utility increase.

**RESPONSE:** Please refer to Response to Comment No. 56.

- 58. COMMENT:** Cheryl Carman – “We cannot afford a raise in our utility bills.”

**RESPONSE:** Please refer to Response to Comment No. 56.

- 59. COMMENT:** Jan Mayfield – Cannot afford another increase in utility bills.

**RESPONSE:** Please refer to Response to Comment No. 56.

- 60. COMMENT:** Corey Smith – “I respectfully request that the push by the Sierra Club and EPA to raise our rates be denied.”

**RESPONSE:** Please refer to Response to Comment No. 56.

- 61. COMMENT:** Patrick Sullivan – “I oppose implementation of the proposed changes which will radically increase our electric bills.”

**RESPONSE:** Please refer to Response to Comment No. 56.

- 62. COMMENT:** Nancy Hollingshed – Opposes proposed utility rate hikes.

**RESPONSE:** Please refer to Response to Comment No. 56.

- 63. COMMENT:** Peggy Grotts -- “We don’t want a PSO rate increase in Oklahoma!”

**RESPONSE:** Please refer to Response to Comment No. 56.

- 64. COMMENT:** Carolyn VanHorn – “We do not want any rate increases for our power in the state of Oklahoma!”

**RESPONSE:** Please refer to Response to Comment No. 56.

- 65. COMMENT:** Felice Hill – Requests that the plan be rejected; does not want utility rates increased.

**RESPONSE:** Please refer to Response to Comment No. 56.

- 66. COMMENT:** Cris Kurtz – Opposes higher utility rates.

**RESPONSE:** Please refer to Response to Comment No. 56.

67. **COMMENT:** Jonathan Ballard – Is against mandates that raise utility rates.

**RESPONSE:** Please refer to Response to Comment No. 56.

68. **COMMENT:** Beverly Brown – Opposes the increase in utility rates.

**RESPONSE:** Please refer to Response to Comment No. 56.

**AEP/PSO – Transcript of Direct Testimony of Howard L. Ground, on behalf of Public Service Company of Oklahoma (PSO), September 26, 2012** submitted by Howard L. “Bud” Ground, Manager, State Governmental and Environmental Affairs, PSO, a subsidiary of American Electric Power Company, Inc. (AEP) to support his oral comments.

69. **COMMENT:** PSO’s environmental compliance plan, which is how PSO refers to this plan and the revised state implementation plan, are an Oklahoma solution. When EPA finalized the Federal Implementation Plan, PSO and state government representatives knew that Oklahoma could come up with a better plan than those in the Federal Implementation Plan. PSO started working at the invitation of the Secretary of Energy and Secretary of Environment, to come up with a plan that would cost less and be better for our customers and our company than installing 800 million dollars or so worth of control equipment on 30-plus-year-old coal units. PSO developed this plan with the DEQ, Secretary of Environment, Secretary of Energy, and in consultation with the Attorney General and the Governor, at the time, and then took that plan to EPA. This is not a plan that EPA, some might say, forced on PSO. This is something that PSO initiated and negotiated with EPA. Pages 23 and 24 of the Transcript of Direct Testimony provide a description of the process and participants involved in the development of the Oklahoma solution and PSO’s environmental compliance plan.

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

70. **COMMENT:** This environmental compliance plan provides for environmental benefits while ensuring the continued reliability and mitigating risks for future environmental regulations. PSO wanted to make sure that the plan met not only the requirements of the Regional Haze rule but also the requirements of the mercury and air toxics rule (MATS). Also, PSO wanted to make sure that it would not be necessary to install additional control equipment on units that through this plan were scheduled to be retired. Additionally, PSO wanted the plan to take care of other air, water, and solid waste issues that were expected to be addressed in EPA regulations in the very near future.

From Direct Testimony, pages 6 and 7, “[t]here are two main current EPA rules requiring PSO to install control equipment to meet emission limits in specific time frames: (1) the Regional Haze Rules (RHR) and (2) the Mercury and Air Toxics Standard (MATS) rule. PSO also faces the prospect of additional costly requirements in the future for its generation fleet, particularly its coal fleet. Over the next five to ten years, PSO will likely have to address requirements under: (1) the successor to the Cross

State Air Pollution (CSAPR), (2) the Coal Combustion Residuals (CCR) Rule, (3) the Clean Water Act (316 (b)) Rule, (4) possible carbon dioxide limitations and other greenhouse gas (GHG) regulations, (5) implementation obligations under the one-hour SO<sub>2</sub> and NO<sub>x</sub> Primary National Ambient Air Quality Standards (NAAQS), (6) future revisions of the ozone and particulate matter NAAQS, and (7) a second planning period under the RHR.”

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

### **Oral Comments**

#### **Gary Sherrer, Secretary of the Environment**

Oral Comments are included in Written Comments No. 38.

#### **John Dirickson, Oologah**

**71. COMMENT:** “We are for and in support of Public Service and their rehab plan, as they have a plan with the Environmental Protection Agency.

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

#### **Tom Schroedter, Executive Director of OK Industrial Energy Consumers**

**72. COMMENT:** “[T]he DEQ SIP never published or posted the entire settlement agreement that was an exhibit - - should have been an exhibit to the – to DEQ’s filing. That also may be a violation of the Open meetings Act which means DEQ must withdraw the proposal.”

**RESPONSE:** The public hearing on the proposed SIP revision was not a meeting as defined in the Open Meeting Act (25 O.S. § 304) and, therefore, the Act does not apply. Even if the Act did apply to this type of hearing, the notice requirements of §§ 303 and 311(B) were satisfied. Section 303 provides that public notice shall “specify the subject matter or matters to be considered . . . .” Section 311(B) provides that “[a]ll agendas required pursuant to the provisions of this section shall identify all items of business to be transacted by a public body at a meeting . . . .” More than thirty days prior to the hearing in question, notice of the hearing was published in the Tulsa World, the Lawton Constitution, and the Oklahoman. In addition, DEQ posted notice of the public hearing on the agency’s website, as well as the proposed SIP revision, appendices, and other related information.

The settlement agreement referenced in this comment is attached to the proposed SIP revision as Appendix I. Attachment B to the settlement agreement is a letter from EPA Assistant Administrator, Gina McCarthy, expressing support for the settlement agreement and indicating confidence that the provisions of the agreement will also result in compliance with EPA’s Mercury and Air Toxics Rule. After reviewing this comment, DEQ determined that the settlement agreement was available on DEQ’s website; however, the McCarthy letter was not attached electronically. Regardless, a hardcopy of

the letter was available at DEQ's Oklahoma City office. In any event, the notice requirements of the Act would still be satisfied, because the Open Meeting Act does not require that the entire content of a document to be discussed at a meeting be published in full prior to the meeting. *See Andrews v. Ind. School Distr. No. 29 of Cleveland County*, 737 P. 2d 929, 931 (Okla. 1987). Rather, as was explained in Attorney General Opinion 82-81, "[t]he function of an agenda for a meeting of a public body is to provide the public with a factual explanation of matters to be taken up at a meeting of the public body." The published notice provided a sufficient description of the topics that were available for public comment at the hearing. The letter, an attachment to the settlement agreement, did not contain substantive information regarding the proposed SIP revision, which was the subject of the hearing. The letter is merely part of the recitals (or background) of the settlement agreement (not part of the agreement section) and the settlement agreement, itself, was merely included in the proposed SIP revision as background (not intended to be part of the BART evaluation or relied upon in the determination). Therefore, the omitted letter was merely background to the background of the proposed SIP revision.

Additional Oral Comments are included in Written Comment Nos. 26 through 36.

**Bud Ground, Manager, Governmental and Environmental Affairs, PSO**

Oral Comments are included in Written Comments Nos. 12 through 15.

**Bob Rounsavell, President, Carrie Dickerson Foundation, Sierra Club member, resident of Oologah**

Oral Comment is included in Written Comment No. 16.

**John Laash for Dogwood Energy, LLC**

Oral Comments are included in Written Comments Nos. 21 through 23.

**Lee Paden, Attorney for Quality of Service Coalition**

Oral Comments are included in Written Comments Nos. 42 through 47.

**Susan Schmidt, Sierra Club member**

Oral Comment is included in Written Comment No. 52.

**Jamie Maddy, Director of Regulatory Affairs, Chesapeake Energy**

Oral Comments are included in Written Comments Nos. 17 through 19.

**Rick Chamberlain, representing Calpine Corporation**

**73. COMMENT:** Calpine Corporation is an independent power producer of an 1100 megawatt privately owned natural gas generating plant located near Tulsa, Oklahoma. After conducting a competitive bid process that was overseen by an independent

evaluator, PSO entered into a purchase power agreement with Calpine. Under this agreement, Calpine will provide 260 megawatts of natural gas fired generation capacity beginning 2016 to replace coal-fired generation capacity that is being curtailed.

**RESPONSE:** DEQ acknowledges the information provided by Calpine; however, replacement of generation capacity is not a component of the EPA-required cost effectiveness review in the Revised BART Determination (*see* Response to Comment No. 28 for further detail).

**74. COMMENT:** Calpine supports the revised SIP.

**RESPONSE:** DEQ acknowledges the comment in support of the proposed SIP revision.

**A.J. Ferate, Devon Energy**

Oral Comment is included in Written Comment No. 20.

**Brandy Wreath, Director, Public Utilities Division, OK Corporation Commission**

Oral statement at public hearing on May 20, 2013, by Brandy Wreath, Director of Public Utilities Division:

**75. COMMENT:** Mr. Wreath requested that “DEQ take a little bit more time before making a final decision . . . based on the concept that all of the relevant information” has not been considered. Mr. Wreath stated that “now we understand there’s additional need for purchase power or additional generation possibly” as a result of the proposed SIP and the possibility of this new information warrants a delay in the final development of the proposed SIP.

**RESPONSE:** As discussed in further detail in the Response to Comment No. 28, the replacement power costs described in Mr. Wreath’s comments are not within the scope of costs to be considered in making a BART determination pursuant to the relevant Federal regulations. In addition, on March 28, 2013, the Oklahoma Corporation Commission granted a Motion to Stay Proceedings filed by Mr. Wreath on February 21, 2013. In the Motion to Stay Proceedings, Mr. Wreath indicated that it is too early in the process to ask the Commission to approve costs related to the requirements that are contained in the proposed SIP revision and requested the Commission to “grant a stay in the proceedings . . .until a revised SIP has been received final approval by EPA.” *See* Motion to Stay Proceedings filed by Brandy Wreath, Cause No. PUD 201200054 (Oklahoma Corporation Commission, Feb. 21, 2013). Therefore, it appears that the Oklahoma Corporation Commission is waiting on “final approval by EPA” before it considers all of the costs within its jurisdiction (including the cost of replacement power). Before EPA approval is possible, DEQ must finalize and submit a final proposed SIP revision to EPA for review. Therefore, it appears that the more expeditiously an approvable SIP revision is submitted to EPA, the sooner any costs associated with replacement power will be considered in the appropriate forum.

Oral Comment is included in Written Comment No. 53.

**Whitney Pearson, Sierra Club**

Oral Comment is included in Written Comment No. 54.

**Jody Harlan, Sierra Club** -- Comments submitted at the public hearing by Jody Harlan, Chair.

Oral Comments are included in Written Comments Nos. 39 through 41.