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OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

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January 31, 2022

John McCreight  
Western Farmers Electric Cooperative  
3000 S. Telephone Rd.  
Moore, OK 73160

Subject: Additional clarifications on Western Farmers' 4-factor analysis on control scenarios under the Clean Air Act Regional Haze Program

Dear Mr. McCreight:

In a letter dated July 1, 2020, the Oklahoma Department of Environmental Quality (DEQ) notified Western Farmers Electric Cooperative that the Arkansas Department of Energy and Environment had requested an analysis of the Hugo Power Plant, located in Choctaw County, Oklahoma, as subject to a four-factor reasonable progress analysis under the Regional Haze Rule as part of DEQ's development process for the state implementation plan covering the second planning period (Round 2) of 2021 – 2028.

On August 20, 2020, Western Farmers submitted its four-factor analysis to DEQ. Western Farmers included in its response that there were no cost-effective sulfur dioxide (SO<sub>2</sub>) control measures available for Unit 1. DEQ included these conclusions in its draft Regional Haze SIP for Planning Period 2 that was shared with the Federal Land Managers (FLM) and the U.S. Environmental Protection Agency (EPA) for their review and comment. DEQ requests that Western Farmers review its four-factor analysis for potential SO<sub>2</sub> control measures for Unit 1 and respond to the following questions, which are based on EPA and FLM review of Oklahoma's draft SIP. We understand that some of the requested data/analysis may be gleaned or explained from DEQ's permitting and compliance files, and/or Western Farmers' submittal. However, your response will allow Western Farmers to document the information that best explains and supports the conclusions of your four-factor analysis. DEQ intends to continue its analysis in parallel.

1. The federal reviewers stated that the use of a 7% interest rate in the cost analysis is not appropriate. The cost analysis should be based on either the bank prime rate or a company-specific interest rate for consistency with the Control Cost Manual.<sup>1</sup> If a company-specific interest rate is available and is being used to estimate the cost of controls, documentation supporting that interest rate should be provided with the cost analysis.
2. The cost estimates for dry flue gas desulfurization (DFGD) and wet flue gas desulfurization (WFGD) were based on cost estimates from the Technical Support Document for EPA's 2011 Oklahoma SO<sub>2</sub> best available retrofit technology (BART) federal implementation plan (FIP).

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<sup>1</sup> See EPA Control Cost Manual at 15-17. The Control Cost Manual can be found at [https://www.epa.gov/sites/production/files/2017-12/documents/epacmcostestimationmethodchapter\\_7thedition\\_2017.pdf](https://www.epa.gov/sites/production/files/2017-12/documents/epacmcostestimationmethodchapter_7thedition_2017.pdf).

The company escalated those cost numbers, which were based on 2009 dollars, to 2019 dollars using chemical engineering plant cost index (CEPCI) escalation indices. While escalation can be a useful tool to adjust relatively recent costs obtained from a similar project/emission unit, EPA's Control Costs Manual recommends not to escalate costs over more than 5 years. EPA recommends that the cost analysis be updated accordingly.

3. Please provide a more detailed assessment of the facility to justify the removal efficiencies used in the analysis (87% for DFGD and 91% for WFGD) since higher removal efficiencies are possible.<sup>2</sup>

DEQ respectfully requests that Western Farmers provide responses to these questions no later than February 28, 2022. Thank you for your assistance with this matter. Please contact Melanie Foster at 405-702-4218 for any questions or clarification.

Sincerely,



Kendal Stegmann  
Director, Air Quality Division

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<sup>2</sup> Please see "SO<sub>2</sub> and Acid Gas Controls"

[https://www.epa.gov/sites/default/files/2021-05/documents/wet\\_and\\_dry\\_scrubbers\\_section\\_5\\_chapter\\_1\\_control\\_cost\\_manual\\_7th\\_edition.pdf](https://www.epa.gov/sites/default/files/2021-05/documents/wet_and_dry_scrubbers_section_5_chapter_1_control_cost_manual_7th_edition.pdf)