State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Relationship to Federal Requirements

Adoption of Oregon 2008 Regional Haze Plan and New Controls for the PGE Boardman Power Plant

Answers to the following questions identify how the proposed rulemaking relates to federal requirements and potential justification for differing from, or adding to, federal requirements. This statement is required by OAR 340-011-0029(1).

1. Is the proposed rulemaking different from, or in addition to, applicable federal requirements? If so, what are the differences or additions?

The proposed rulemaking is different from, or in addition to, applicable federal requirements because it is more specific than the federal requirements. The proposed Oregon Regional Haze Plan was developed by the department to meet the federal Regional Haze Rule. Included in the proposed plan are requirements for certain industrial sources to meet the Best Available Retrofit Technology (BART). The proposed plan also includes other requirements to demonstrate "Reasonable Progress" in improving visibility by a 2018 milestone date.

The Regional Haze Rule requires BART be addressed in the first regional plan submitted by a state. The BART process consists of an evaluation of various control options for certain large industrial sources that have a significant visibility impact in a federal Class I areas. BART requires these controls be installed no later than five years after EPA approval of the state's regional haze plan. While states follow federal law and guidance in conducting this analysis, the determination of what controls satisfy BART is made by the state.

The Regional Haze Rule also requires the first regional haze plan demonstrate reasonable progress in making incremental improvements in Class I visibility by 2018, called the 2018 milestone year. In the proposed Oregon Regional Haze Plan, the DEQ projects that the 2018 milestone will not be met for the haziest or worst visibility days. If a state projects that the 2018 milestone will not be met, the federal rule requires the state to evaluate and determine what additional measures are needed to meet the milestone.

The primary action associated with the proposed rulemaking is the proposed emission controls for nitrogen oxides (NOx) and sulfur dioxide (SO2) for the PGE Boardman coal-fired power plant. These controls are being proposed in two steps. The first step (Phase 1) involves NOx and SO2 controls to meet the federal requirements for BART. The second step (Phase 2) represents additional NOx controls to meet the Reasonable Progress requirements, and provide other air quality benefits (described below).

Also related to the Reasonable Progress requirement is the proposed Long-Term Strategy in the Oregon Regional Haze Plan, which includes a commitment by the department to evaluate in the next five years other industrial sources that do not fall under the BART requirements.

This evaluation of "non-BART" sources could result in additional control requirements for these sources in the next ten years. Again, while states are required to have a Long-Term Strategy in their plans, this commitment to evaluate non-BART sources is more specific than the federal requirement to demonstrate reasonable progress.

Included in the proposed rulemaking is the adoption of the revised Oregon Smoke Management Plan (OSMP) into Oregon's State Implementation Plan (SIP). This plan was amended by the Oregon Department of Forestry in 2007, and is being included in this rulemaking with no additional changes. Provisions in the OSMP pertaining to Enhanced Smoke Management Programs (ESMP) for forestry burning will be incorporated into the proposed Oregon Regional Haze Plan. These ESMP provisions are requirements under the federal Regional Haze Rule, and as such are not different from, or in addition to, applicable federal requirements. However, the Long-Term Strategy in the proposed Oregon Regional Haze Plan contains a commitment to determine if more stringent controls for forestry burning will be needed in the next 10 years to meet the Reasonable Progress requirements, which would be in addition to ESMP requirements in the federal Regional Haze Rule.

2. If the proposal differs from, or is in addition to, applicable federal requirements, explain the reasons for the difference or addition (including as appropriate, the public health, environmental, scientific, economic, technological, administrative or other reasons).

The Phase 1 controls proposed for the PGE Boardman power plant represent DEQ's determination of the appropriate controls to meet the federal requirements for BART. Using federal guidance, DEQ evaluated the costs, benefits, and technical feasibility of different control options for NOx and SO2 in making this determination. DEQ believes the Phase 1 NOx and SO2 controls being proposed represent typical controls required for other facilities similar to PGE Boardman.

Although sources have up to five years to install BART, the proposed Phase 1 NOx controls will be required by July 2011, based on DEQ's determination these controls are readily available, and should be installed as expeditiously as possible. The Phase 1 SO2 controls are being required by July 2014, based on DEQ's determination five years is needed, due to demands on material and labor due to similar other BART determinations and requirements for these controls in other states.

The Phase 2 controls being proposed for PGE Boardman were the result of DEQ's decision that additional reductions in NOx emissions were necessary to demonstrate reasonable progress in meeting the 2018 milestone. Unlike BART, which is a process for evaluating appropriate haze controls, the Reasonable Progress requirements represent a performance standard that a state must meet. The other regional haze strategies in the Oregon Regional Haze Plan did not provide enough visibility improvement to meet the 2018 milestone. The Departments' analysis shows that the proposed Phase 2 controls will result in significant visibility improvements in 14 Class I area that are impacted by the PGE Boardman plant. In addition, DEQ has identified other benefits provided by Phase 2, such as visibility improvements and reducing acid rain deposition in the Columbia River Gorge National Scenic Area. This scenic area is not a federal Class I area, and therefore not subject to the federal Regional Haze rule.

DEQ determined that the installation date for installing Phase 2 controls should be July 2017, based on the following factors: (1) substantial time is needed to make major boiler modifications so that the retrofit controls operate at their designed maximum efficiency; (2) extra time needed to acquire, construct, and install these controls due to similar retrofit controls being required in the eastern U.S., and (3) the extended schedule will allow PGE to evaluate new and environmentally more compatible technologies.

The two commitments in the Long-Term Strategy to evaluate non-BART sources and forestry burning in the next five years were the result of the DEQ's decision that additional measures will be needed to achieve the 2018 milestone. The evaluation of non-BART sources will be a stakeholder-based effort to develop comprehensive guidance for evaluating their contribution to haze and the need for additional controls. The evaluation of forestry burning will determine the extent this activity contributes to the worst visibility days and whether additional smoke management controls would be appropriate. Both evaluations will be deliberative processes that may not necessarily result in controls being required.

3. If the proposal differs from, or is in addition to, applicable federal requirements, did the Department consider alternatives to the difference or addition? If so, describe the alternatives and the reason(s) they were not pursued.

In developing the proposed controls for PGE Boardman, DEQ considered several alternatives. The alternative that represented the greatest stringency was a single phase approach, where Phase 2 controls would be installed at the same time as Phase 1 controls (by 2014). However, as described above, the Phase 2 controls would require more than the five years under BART, based on the substantial time needed for boiler modification, and time to acquire, construct, and install these controls. The alternative that represented the least stringency was not requiring Phase 2 controls at all. This was rejected due to the significant visibility impacts caused by PGE Boardman as indicated by DEQ's modeling of this plant, and need to make additional visibility improvements by the 2018 milestone and demonstrate Reasonable Progress.

DEQ's selection of Phase 1 SO2 controls was based on evaluating two alternative controls. The one chosen for PGE Boardman: (1) provided slightly greater visibility improvement; (2) cost significantly less than the alternative; (3) had no issues associated with water use and water treatment, as did the alternative; and (4) was compatible with mercury emission controls required for PGE Boardman during the time period as the Phase 1 controls.

The evaluation of alternatives is an inherent part of the BART process. DEQ followed federal BART guidance in evaluating the following factors in PGE Boardman's BART determination: (1) identifying all available retrofit control technologies, (2) the cost effectiveness, (3) energy and non-air quality impacts, (4) and the amount of visibility improvement under each control option.

See DEQ's BART Report for the PGE Boardman for additional analysis of alternatives evaluated by the department at http://www.deq.state.or.us/aq/haze/docs/deqBartReport.pdf.