

## How EEI's Key Issues Are Addressed in the Final Utility MACT Rule

January 5, 2012

### 1. Compliance Timeline

Proposed Rule: EPA determined that the controls needed to comply with the rule could be installed and retrofitted within three years. EPA encouraged states, as the permitting authorities, to grant an additional year for compliance on a case-by-case basis for controls or on-site replacements.

EEI Ask: EEI requested, under Clean Air Act (CAA) section 112(i)(3)(B), a categorical one-year extension of the compliance deadline for all units that are installing pollution control equipment, being replaced or repowered, or expanding transmission capacity for reliability purposes.

EEI also recommended that the President issue an order under CAA section 112(i)(4) to allow additional time in instances where the utility is continuing to take diligent, good-faith measures to achieve compliance; the needed technology is not available; and the appropriate RTO, NERC or appropriate state commission certifies that an extension of time is necessary to address reliability issues or is consistent with the applicable state-approved IRP (or similar state process), which may take into account the potential reliability and economic impacts of compliance decisions.

Final Rule: EPA did not adopt a blanket one-year extension. EPA did allow permitting agencies broad latitude to grant extensions consistent with CAA section 112(i)(3) for installing controls, staggering control installations, or replacements on-site of an existing unit. The availability of a fourth year for construction of new, off-site generating units or transmission upgrades is limited to situations where reliability would be harmed if a unit were retired; in addition, the fourth-year extension is limited in situations where generation from the retiring unit is needed to maintain reliability while other units install controls.

The President issued a presidential memorandum to EPA addressing “Flexible Implementation of the Mercury and Toxics Standards Rule.” It directs that the additional fourth year should be “broadly available to sources, consistent with law, and to invoke this flexibility expeditiously where justified.” The preamble to the rule asserts repeatedly that the vast majority of units can comply within three or four years. The final rule does not grant a blanket one-year extension, but EPA encourages states to approve one-year extensions when needed and expanded the scope of such extensions to a “broad range of situations.”

EPA and the Administration in general resisted the use of an executive order under section 112 to extend compliance beyond four years. The presidential memorandum directs EPA to promote early coordination to maintain reliability and directs EPA to coordinate with all relevant stakeholders about reliability. The memorandum specifically indicates that EPA can allow an

additional year under section 113—the enforcement provision of the CAA—to address a “specific and documented electric reliability issue.”

EPA’s Office of Enforcement and Compliance Assurance also issued a separate enforcement policy on December 16 that explains its process to bring “reliability-critical units” into compliance using case-by-case administrative orders under section 113. The policy specifically suggests that utilities file compliance plans with their planning authorities within one year and indicates that, while it may issue what appears to be an advisory opinion before the end of the fourth year, it will not issue a final order until on or after the fifth year begins. Other aspects of the memorandum outline the information and process that is required, but also raise other process questions.

## **2. Particulate Matter (PM) Standard**

Proposed Rule: EPA proposed total PM (filterable, *i.e.*, PM<sub>2.5</sub> plus condensable) as a surrogate, with alternate surrogates of total metals or individual metals. EPA proposed a total PM limit of 0.03 lb/MMBtu for existing coal units. EPA also stated that the initial compliance test at a unit sets an enforceable operating limit for that unit.

EEI Ask: EEI urged EPA to finalize a filterable PM limit, instead of the proposed total PM limit, as the surrogate for non-mercury metallic HAPs. While EEI did not propose a specific standard for filterable PM, we preferred that EPA would keep it at the same level as the proposed limit (0.03 lb/MMBtu). EEI also asked that initial performance tests not create enforceable, site-specific operating limits.

Final Rule: In the final rule, EPA utilized a filterable PM limit at the same level as the proposed total PM limit (0.03 lb/MMBtu) for existing coal units, with alternate surrogates of total metals or individual metals. Initial compliance tests do not create enforceable, site-specific PM limits. An operator may choose to use a PM continuous parametric monitoring system (CPMS) to demonstrate continuous compliance. If the operator uses a PM CPMS, it must establish an operating limit based on performance testing and reestablish the operating limit annually. In addition, a filterable PM new source performance standard also is established.

## **3. Mercury (Hg) Standard**

Proposed Rule: EPA initially proposed a limit of 1.0 lb/TBtu. The proposed standard was set using a limited data set of 40 units to address EPA’s perception (as a result of a conversion error) that the stack test data collected did not represent the best performing units.

EEI Ask: EEI urged EPA to recalculate the Hg standard for existing units using Information Collection Request (ICR) stack test data that EPA collected from 127 units—which the agency presumed were the best-performing 12 percent of existing units—consistent with the ICR approved by OMB and the method that EPA used to set the PM and acid gas standards. EEI also asked EPA to create a separate subcategory for circulating fluidized bed (CFB) boilers to address unique issues for plants burning lignite.

Final Rule: As a result of correcting technical errors, the final Hg standard was revised to 1.2 lb/TBtu; however, this revised standard is still based on the limited 40-unit data set. To address concerns about lignite coal, EPA created a subcategory for “low Btu, virgin coal” that effectively serves to separate CFBs from units with conventional boilers that burn low-rank coals.

EPA is allowing an alternative compliance period for mercury. For units in the same subcategory located at the same facility, mercury emissions can be averaged over a 90-day period instead of 30 days; however, the limit would be 1.0 lb/TBtu.

#### **4. Emissions Averaging**

Proposed Rule: EPA proposed to allow 30-day averaging as a means to demonstrate alternative compliance with the MACT standards in limited circumstances—available only to owners and operators of existing units at the affected source that are within a single subcategory.

EEI Ask: EEI urged EPA to broaden the proposed emissions averaging provisions to allow averaging whenever it can be shown that the averaged emissions do not exceed the emissions limits that would apply to individual units. Specifically, EEI asked EPA to allow averaging across subcategories and where units share common stacks. Subsequently, EEI requested a longer averaging period (six months to a year) for mercury given the large variability of emissions from existing units.

Final Rule: EPA did not increase the 30-day averaging period or allow averaging across subcategories at the same facility. EPA did exclude startup and shutdown periods from the averaging calculation (see below). Additionally, as discussed above, EPA is allowing an alternative 90-day compliance averaging period for mercury in limited circumstances.

#### **5. Startup and Shutdown (SS)**

Proposed Rule: EPA proposed that MACT standards apply during all periods of operation, including periods of SS, and asserted that providing a 30-day averaging period will smooth out any emissions increases associated with infrequent SS periods.

EEI Ask: EEI urged EPA to provide work practice standards for periods of SS and to exclude these periods from the averaging calculation.

Final Rule: EPA finalized work practice standards for periods of SS and explicitly stated that emissions during these periods should be excluded when calculating rolling averages. In general, the work practice standards require the use of natural gas or distillate oil during startup until controls are engaged.

However, the new definitions for “startup” and “shutdown” in the final rule may not comport with actual utility operations.

## **6. Limited-use Oil-fired EGUs Subcategory**

Proposed Rule: EPA stated that it was considering creating a subcategory for limited-use oil-fired units and requested comment.

EEI Ask: EEI supported EPA's proposal to create a subcategory for limited-use oil-based units and asked that EPA (1) define the subcategory to include units with an annual capacity factor of 10 percent or less, and (2) provide work practice standards instead of numeric emissions standards for these units. In subsequent discussions, EEI indicated that if a 10-percent capacity factor was too high, a longer averaging period of up to two years or an exception for emergencies (*e.g.*, natural disasters, reliability, *etc.*) could help compensate for a lower percentage.

Final Rule: EPA created a limited-use subcategory with a capacity factor limit of no more than 8% measured over a 24-month block. There is no annual cap of the capacity factor, and operation due to emergencies is included in the capacity factor calculation.

## **7. Organics/Furans/Dioxins Standard**

Proposed Rule: EPA proposed work practice standards for organics, furans and dioxins.

EEI Ask: EEI supported EPA's decision to use work practice standards in lieu of numeric emissions limits for organics, furans and dioxins. EEI asked EPA to clarify the proposed work practice standards.

Final Rule: EPA issued work practice standards for these pollutants that address concerns raised in EEI's comments.

## **8. Compliance Testing and Monitoring Requirements**

Proposed Rule: Many of EPA's proposed compliance, testing and monitoring requirements were unclear, inconsistent or unnecessary.

EEI Ask: EEI urged EPA to address inconsistencies and unclear requirements in general, as well as to eliminate or revise unnecessary provisions.

Final Rule: The requirements are clarified and simplified, although technical input will be needed to determine the usefulness of the changes.

## **9. New Source Standards**

Proposed Rule: EPA proposed stringent standards based on a pollutant-by-pollutant approach, some of which are not measureable with current, state-of-the-art technology.

EEI Ask: EEI urged EPA to compute new source limits with which units could realistically comply. EEI questioned whether EPA's pollutant-by-pollutant approach to setting these standards is consistent with the CAA.

Final Rule: EPA reaffirmed its pollutant-by-pollutant approach to setting MACT limits. In response to new data, EPA changed many of the new source standards, some of which became more (and some less) stringent. EPA claims that one EGU currently meets all three final HAP standards. The final limits for new sources reflect emissions levels that EPA would expect to see from a newly constructed source outfitted with a full suite of state-of-the-art controls.

Technical input will be needed to determine whether these standards are achievable in practice.

## **10. Lignite Subcategory**

Proposed Rule: The proposed rule included a subcategory for “units designed for coal less than 8,300 Btu/lb,” which generally was intended to address units that burn lignite.

EI Ask: EEI sought technical corrections to the definition of a qualifying unit for this subcategory. Specifically, EEI asked EPA to drop the height-to-depth requirement, which limited eligibility for the subcategory.

Final Rule: EPA removed the height-to-depth requirement, allowing more units to qualify for this subcategory. We also note that the emissions limits for lignite coals (covered by the revised subcategory for “low Btu, virgin coal”) are more stringent than in the proposal.

## **11. DSI Assumptions**

Proposed Rule: For the acid gases standard, EPA assumed that wet scrubbers would not be needed for compliance, predicting that 56 GW of DSI and 25 GW of dry scrubbers would be used.

EI Ask: EEI urged EPA to revise assumptions about DSI to address several concerns, including the limited utility of DSI for units that burn higher-sulfur coals; higher variable costs; the likely need to install fabric filters to address increased PM emissions; the potential for DSI to interfere with Hg controls; and possible impacts on the beneficial reuse of fly ash. EEI noted that EPA’s assumptions about DSI directly affected the agency’s estimates about the costs and timing of installing controls to comply.

Final Rule: EPA made modest changes to its DSI modeling assumptions with minor impacts on the original costs and timing estimates.