COALITION OF NEW UNITS

Comments On
National Emission Standards for Hazardous Air Pollutants from Coal and Oil–Fired Electric Utility Steam Generating Units

Submitted Electronically to:
The Environmental Protection Agency
Air Docket
Attention Docket ID NO. EPA-HQ-OAR-2009-0234

August 4, 2011

COALITION OF NEW UNITS MEMBERS:

City of Holland Michigan Board of Public Works

CMS Energy Corporation

South Texas Electric Cooperative, Inc.

Sunflower Electric Power Corporation

Wolverine Power Supply Cooperative, Inc.

August 4, 2011

VIA ELECTRONIC MAIL TO: a-and-r-docket@epa.gov

US Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Attention: Docket ID Nos. EPA-HQ-OAR-2009-0234 and EPA-HQ-OAR-2011-0044

Re: *National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units*, 76 Fed. Reg. 24976 (May 3, 2011).

Ladies and Gentlemen:

We are all developers of new electric generating units using coal or oil-based solid fuels (pet coke)—collectively referenced as solid-fueled units. Our units have received air construction permits and are at risk of becoming subject to EPA's new-unit standards for purposes of EPA's proposed EGU Mercury and Air Toxics Rule. In all, twelve projects totaling over 9,000 MW of new generation including supercritical pulverized-coal, circulating fluidized bed, and integrated gasification combined-cycle units are affected. Five of those project developers (including project participants) join here to respond to EPA proposed NESHAPs rule; Exhibit A identifying said participants is attached. We write to express grave concern that the Maximum Achievable Control Technology (MACT) standards that EPA has proposed will foreclose development of new solid-fueled units. Many of us intend to file separate comments on this and other issues, but we join together to highlight the issues and show that the effect of the rule is not limited to one or a small group of units but applies to all such new solid-fuel units in general.

A report has already been filed in this docket by Ralph L. Roberson, P.E., of RMB Consulting & Research, Inc., that highlights methodological problems with EPA's proposed rule and demonstrates why he believes new solid-fuel generation cannot be built under the proposed rule. Roberson, who has decades of relevant experience and has worked with many of us on our new units, accurately describes the major problems. His report is attached for convenience.

As set forth in Roberson's report, EPA's approach to standard-setting was to establish a MACT standard for each individual pollutant based on the performance of the best-controlled individual plant for that particular pollutant. However, no existing plant actually meets all of the individual new-unit MACT standards, and EPA did not attempt to show that any existing plant does so. Further, while each of these proposed projects will utilize one of the three current solid-fuel technologies, and while some of them contemplate the use of blended fuels (including biomass), we know of none that have been able to obtain the commercial guarantees based upon meeting the proposed standards guarantees necessary to allow their construction to proceed.

Our conclusion has been reinforced repeatedly in our discussion with vendors; no vendor has offered a guarantee that they can meet the emission limitations proposed in the EGU MACT. The largest air pollution control technology company in the world has stated to EPA representatives at a meeting that Sunflower had with them on June 30, 2011 that they could not guarantee these standards as proposed. Further, Bechtel, the largest utility plant constructor in the US, has confirmed that they will not make any guarantee that is not first offered by a vendor and that has not been adequately demonstrated in practice.

This point is also reinforced in comments filed in this docket on July 8, 2011, by the Union for Jobs and the Environment (UJAE). As shown in the tabular information attached to those comments, data that EPA provided UJAE show that no existing unit meets *all* of the proposed new-unit MACT standards. As the UJAE concluded

> The proposed MATS rule would preclude the construction of any new coal-based electric generating units due to the severity of its emission limitations for mercury, acid gases, and particulate matter (PM). Data provided by EPA on June 8, 2011, show that no unit in EPA's sample of more than 200 coal-based generating units meets the combined MATS new source emission limits for mercury, acid gases, and PM (see Attachment 1 and table below).

Additionally, the plant that EPA selected as the best-controlled similar source for PM, the AES Hawaii Unit 1, is not a representative unit.

- It burns Indonesian coal.
- Its generating capacity is nominally 180 MW; but the emissions source identified, in reality, is only half that, and it also burns old tires, used motor oil, and carbon from the State's Board of Water Supply filters.
- The performance data for the unit, moreover, do not appear to be representative of what the unit will regularly achieve in practice.
- Therefore, EPA's PM standard is not representative of what is achievable in practice.

Finally, Roberson's report sets forth concerns as to whether the standards are set so low as to be below method detection limits. For example, as shown in Roberson's report, burning bituminous coal with a nominal chloride content equal to 750 ppm will require approximately 99.95 percent removal to comply with the proposed HCl standard. No vendor will guarantee 99.95 percent removal, which would be necessary to secure financing. Moreover, the proposed HCl standard is 66 times more stringent than the proposed standard for existing units even though all of the existing units selected for acid gas testing in EPA's 2010 ICR used either wet or dry scrubbing systems. As Roberson states, "There is no plausible explanation for how a new scrubber can be 66 times more efficient than the average of the best performing 12 percent of existing scrubbers." Similar control efficiencies for Hg would also be required, again with no guarantees available.

In addition to the *similar source* issue, Roberson also believes EPA made a computational error in converting the AES Hawaii Unit 1 total PM results from input units (lb/mmBtu) to output-based units (lb/MWh). EPA mistakenly assumed that both AES units have a capacity of 180 MW; actually, the capacity of the two-unit plant is 180 MW. This error is easily verified in EPA's spreadsheet because it shows Unit 1 has a heat rate of 5.03 mmBtu/MWh, but the correct value is exactly twice that or 10.06 mmBtu/MWh. When the corrected heat rate (or conversion error) is incorporated into the three individual total PM runs, a repeat of EPA's UPL calculation yields a calculated PM value of 0.10 lb/MWh. Even as unrepresentative as AES Unit 1 may be for the purpose of determining MACT, it does not appear to support an emission limit of 0.05 lb/MWh. We respectfully request that EPA revisit the MACT determinations to ensure that these computational errors are corrected prior to advancing the final rule.

We believe that the decision to adopt standards that foreclose new generation technology using coal or other solid-fuel is not a wise one, nor do we think it is permissible under the Clean Air Act. Since our units are new, they are subject to very recent Best Available Control Technology requirements. In fact, a case-by-case Maximum Achievable Control Technology analysis was performed in nine of these permit applications (In the other three situations the sources were evaluated as not major sources of HAPs, and the case-by-case analysis is not applicable in those situations.). Thus, for all applicable air pollutants, our units will be among the very cleanest coal-fueled units in the country. Constructing our units will ultimately allow the retirement of much older, higher-emitting units with a very significant net air quality improvement. Constructing our units will also create needed new jobs and economic development. We estimate that all of the new units that are now permitted collectively create 17,750 construction jobs and $21.7 billion in economic investment. Yet these benefits will be sacrificed if EPA finalizes the new-unit standards as proposed and they are applied to those units. Moreover, the very substantial amount of baseload generation we propose to develop will need to be replaced by other baseload resources, either nuclear or natural gas.

The adoption of the proposed standards would constitute a major energy policy determination that has implications far beyond just the units we propose to develop. The adoption of the proposed rule will have significant consequences for the reliability and cost of electricity in this country and for the economy in general. Critically, the proposed rule does nothing to acknowledge the possibility that the construction of new coal units may have been foreclosed because they cannot meet the new limits. EPA should acknowledge and discuss this possibility so that the country does not unintentionally adopt a major new energy policy, without the opportunity to consider the possible outcomes of the decision; especially since the majority of US citizens are unaware of this new policy and its potential negative consequences.

Sunflower staff, and our consultant, Roberson, participated in a meeting with EPA staff in Washington on June 30, 2011, during which we discussed at length our inability to secure vendor and erector guarantees for EPA's proposed limitations that are below detection levels and the fatal flaw that the absence of guarantees bring to project

financing decisions. On several occasions your staff asked that the emission levels for which guarantees are achievable for purposes of the rulemaking be identified in comments. Accordingly, in response to your specific request, we urge you to revise the MACT standards by adopting the most stringent case-by-case MACT determination recently made by the various state permitting authorities. These MACT determinations were conducted in strict compliance with a most rigorous procedure set forth in regulation by EPA, subjected to public review and comment, and in many cases have undergone administrative and judicial review. We recommend the following emission standards for new EGU facilities, all of which were established as MACT for Wolverine Clean Energy Venture (The surrogate metric strategy as proposed by EPA is followed here, with the exception that filterable PM_{10} rather than PM total is the appropriate metric selected in each of the case-by-case MACT analyses):

TABLE 1 – COMPARISON OF ACHIEVABLE VS. EPA PROPOSED MACT LIMITATIONS

	Permit MACT Analysis (Case-by-case)	EPA-proposed MACT for "new units"	EPA-proposed MACT for "existing units"
PM_{10} (filterable)	0.010 lb/mmBtu	0.0056 lb/mmBtu	0.030 lb/mmBtu[1]
HCl (bituminous)	0.0011 lb/mmBtu	0.000323 lb/mmBtu	0.0020 lb/mmBtu
Hg (non-Lignite)[2]	0.0077 lb/GWh	0.0002 lb/GWh	0.008 lb/GWh

We note that our proposed emission limitations, while less severe than those proposed by EPA for new units, are also more stringent than those proposed by EPA for existing units. We remind EPA that even our recommended limits, with the exception of PM_{10}, have not yet received either vendor or EPC guarantees, nor have they been established by contract(s). Plant Washington's limits were not established by the case-by-case determination as they were established following the proposal date of the EPA's EGU MACT. In this situation the permitting authority simply imposed the EPA's own proposed rule as permit conditions.

Additionally, EPA should establish a subcategory consisting of units that had received air construction permits but had not yet commenced construction as of the date of EPA's proposed rule. Such a category would be justified because a substantial amount of time, money, and effort have been invested in these units. Imposing new source standards on these units for which EPA's proposed rule had not been anticipated during

[1] Limitation indicated is for Total PM_{10}. EPA has not proposed a limit for filterable PM_{10}.

[2] We do not recommend a specific limitation for lignite coal as we do not intend to use lignite as a fuel. However, EPA should retain a sub-category for lignite in the final rule.

their permit consideration would unreasonably and arbitrarily impose additional costs and burdens on these projects and would likely threaten the viability of many of them. The standards for this subcategory would be based on the anticipated performance of these units (as reflected by the permitted case-by-case emission levels), ensuring a reasonable and appropriate level of HAPs control without unreasonably and arbitrarily upsetting the development of these units.

If EPA does not alter the final emission limits consistent with our recommendations, consistent with the timeline in 40 CFR 63.44(b)(1) and (2), EPA should expressly provide in the final rule a period of eight years following commencement of operation for these facilities to demonstrate compliance with the final HCl, Hg, and the non-mercury metal HAP standards. We also recommend that the final rule provide this same period for compliance for the non-major sources in this group as well. This provision would be both necessary and appropriate, given the absence of currently available vendor and/or erector guarantees necessary so that the current projects may be financed.

We appreciate your attention to this letter and are prepared to meet with you as a group to discuss these matters at your convenience. Please contact Wayne Penrod for additional information or with any questions.

Wayne E. Penrod
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EXHIBIT A – PERMITTED EGUS IMPACTED BY EPA-PROPOSED NEW UNIT MACT

Plant Name	*Developer/Utility*	*Size (MW)*	*Type*	*State*	*Permit Date*
Trailblazer	Tenaska	900	SCPC w/ CCS	Texas	12/14/2010
Taylorville	Tenaska	770	IGCC w/ CCS	Illinois	6/5/2007
Longleaf	LS Power	1200	SCPC	Georgia	5/15/2007
Plant Washington	POWER4Georgians	800	SCPC	Georgia	4/8/2010
Holcomb 2	**Sunflower Electric Power**	**895**	**SCPC**	**Kansas**	12/16/2010
White Stallion Energy Center	White Stallion Energy	1320	CFB	Texas	12/27/2010
Holland Board of Public Works	**City of Holland**	**78**	**CFB**	**Michigan**	2/11/2011
Wolverine Clean Energy Venture	**Wolverine Power Cooperative**	**600**	**CFB**	**Michigan**	6/29/2011
Coleto Creek 2	**South Texas Electric Cooperative**	**650**	**SCPC**	**Texas**	4/28/2010
Limestone 3	NRG Texas LP	750	SCPC	Texas	12/1/2009
Karn-Weadock Complex	**Consumers Energy**	**830**	**SCPC**	**Michigan**	12/29/2009
Summit	Texas Clean Energy Project	375	IGCC	Texas	12/31/2010
		9168			

Note: Owners/developers/participants of the projects in bold are members of the Coalition of New Units.

EXHIBIT B - COALITION OF NEW UNITS MEMBERS

City of Holland Michigan Board of Public Works — Mr. Loren Howard
CMS Energy Corporation — Ms. Nancy A. Popa
South Texas Electric Cooperative, Inc. — Mr. John Packard
Sunflower Electric Power Corporation — Mr. Wayne E. Penrod
Wolverine Power Supply Cooperative, Inc. — Mr. Brian Warner