

**COMMENTS BY ECO POWER SOLUTIONS (USA) CORPORATION**

**ON**

**NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MAJOR SOURCES: INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AND PROCESS HEATERS (FEDERAL REGISTER VOL. 76, NO. 247, DECEMBER 23, 2011 AT 80598 et seq.)**

**EPA DOCKET ID NO. EPA-HQ-OAR-2002-0058; FRL-9503-6**

Eco Power Solutions (USA) Corp. (hereafter called “Eco Power” or “Eco Power Solutions”) provides these comments to EPA’s proposed reconsideration and revisions (76 Fed. Reg. No. 247, 80598 et seq.(December 23, 2011) to the rule originally promulgated on March 21, 2011 for National Emission Standards of Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters, which will hereafter be referred to as the “original Boiler Rule” (76 Fed. Reg. No. 54 at 15608 et seq.).

By way of background, Eco Power has developed and deployed new multi-pollutant removal technology for the reduction of Hazardous Air Pollutants (“HAPs”), including mercury (Hg) (95% removal), and conventional pollutants including sulfur dioxide (SO<sub>2</sub>) and sulfur trioxide (SO<sub>3</sub>) (> 98% removal), and various oxides of nitrogen (NO<sub>x</sub>) (> 99% removal).<sup>1</sup>

Preliminary analysis also indicates high removal rates for particulate matter (PM) and hydrogen

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<sup>1</sup> See Attachment 1 to these comments as to the latest (February 2, 2012) NO<sub>x</sub> removal data. Previously, SO<sub>2</sub> and SO<sub>3</sub> removal of ≥ 98% and Mercury removal of 95% were documented to EPA in Attachments 3 and 5 to Eco Power’s comments to EPA filed on August 4, 2011 on the then proposed National Emission Standards for Hazardous Air Pollutants Coal and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electricity Utility, Industrial-Commercial-Institutional, and Small-Industrial-Commercial-Institutional Steam Generating Units, 76 Fed. Reg. No. 85 at 24976 et seq. (May 3, 2011)(Comments designated by EPA in that rulemaking as Comment 4893). That rule, which was finalized on December 21, 2011 and published in the Federal Register on February 16, 2012, is hereafter referred to as the “EGU Rule.”

chloride (HCl). Eco Power's technology is readily useable on fossil fuel fired industrial boilers including boilers designated as "major sources" and avoids the environmental harms that result from the use of conventional single pollutant removal technologies. Although these harms primarily relate to the control of conventional pollutants, the harms are directly relevant to the major source rulemaking under Section 112 of the Clean Air Act ("CAA") since the same facilities that are subject to the Boiler Rule are also going to have to control conventional pollutants such as SO<sub>2</sub> and NO<sub>x</sub>. Those harms and the importance of avoiding them are described in greater detail below.

### **The Focus of These Comments**

The most important part of EPA's proposed HAPs rule revision for major source industrial boilers, and also in a sense the most legally challenged portion of the proposed reconsideration and revision of the Boiler Rule, is the "reset" of the schedule for compliance. Without a "reset," compliance must be achieved within three years from the date the original Boiler Rule was originally effective, May 20, 2011 (i.e. May 2014 – slightly more than two years from now), plus one year for source by source extensions (i.e. May 2015 at the latest).<sup>2</sup> It is critically important that the compliance date be reset not only for the reasons given by EPA in its proposed reconsideration of the original Boiler Rule, but additionally because without a reset, it will be virtually impossible for operators of industrial boilers that are major sources to achieve compliance without rushing to install conventional technology without any realistic opportunity to evaluate innovative multi-pollutant removal technology such as Eco Power's COMPLY 2000<sup>®</sup> and other new technologies.

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<sup>2</sup> The original Boiler Rule was published in the Federal Register on March 21, 2011, but did not become effective until May 20, 2011. 76 Fed. Reg. No. 54 at 14608.

In these comments, we will first summarize what EPA proposes to do and the rationale for it; second, the strong Congressional policy favoring innovation in emission control technology; third, the legal deficiency in the approach that EPA has proposed under controlling D.C. Circuit opinions; and fourth, what EPA should do in order to cure the deficiency in what it has proposed to do, so as to achieve the revised compliance schedule in a manner that is consistent with the CAA and the Administrative Procedure Act (APA) - rather than what it has proposed to do which environmental groups will likely contend violates the CAA.

### **What EPA Has Proposed to Do**

What EPA has proposed to do is to “reset” the compliance date for existing sources to the date three years after the date effective date of the final reconsideration of the Boiler Rule. 76 Fed. Reg. at 80,605, 80,616-17. EPA specifically requested comment on the proposed changes to the compliance dates. *Id.*, at 80,617.

Part of the rationale provided by EPA for doing the “reset” is that when EPA announced its reconsideration and its attempted postponement of the effective date, it indicated that requirements were to change significantly and that the resulting uncertainty has limited the ability of affected sources to begin making selection of control technologies and compliance decisions. Moreover, even if significant changes were not being proposed, “an extended compliance date would likely be necessary to provide enough time for facilities to achieve compliance.” *Id.*, at 80,616.<sup>3</sup>

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<sup>3</sup> EPA also noted that the availability of control equipment and vendors to install control equipment for boilers is in question due to the demands of the EGU rulemaking which will require controls from many of the same vendors. *Id.*

## The Strong Congressional Policy Favoring Innovation in Emission Control Technology

The Supreme Court has summarized the point in *Chem. Mfrs. Ass'n v. Natural Res. Def. Council, Inc.*, 470 U.S. 116, 155-56, 105 S.Ct. 1102, 1123 (1985).

The legislative history [of the CAA] also makes clear why Congress found it so important that the standards be set for “categories” of dischargers, and not for individual dischargers. Congress intended to use the standards as a means to “force” the introduction of more effective pollution control technology. Thus, Congress directed EPA to establish BPT levels by reference to “the average of the best existing performance by plants of various sizes, ages, and unit processes within each industrial category.” 118 Cong.Rec. 33696 (1972) Leg. Hist. 169 (Sen. Muskie). In establishing BAT levels, it directed EPA to look at “the best performer in an industrial category.” 118 Cong.Rec. 33696 (1972) Leg.Hist. 170. By requiring that the standards be set by reference to either the “average of the best” or very “best” technology, the Act seeks to foster technological innovation. 118 Cong.Rec. 33696 (1972) Leg.Hist. 170. See generally La Pierre, Technology-Forcing and Federal Environmental Protection Statutes, 62 Iowa L.Rev. 771, 805-829 (1977); Note, Forcing-Technology: The Clean Air Act Experience, 88 Yale L.J. 1713 (1979).

Similarly in order to encourage the use of innovative multi-pollutant control technologies and other innovative technologies, EPA in the final EGU NSPS rule, 40 C.F.R. Part 60, provided for commercial demonstration permits to a limited number of EGU operators that deployed innovative multi-pollutant control technologies and other innovative technologies. As EPA explained in its proposal for the EGU rule:

[T]o encourage the continued development of new technologies that show promise in achieving levels of performance comparable to those of existing technologies, but at lower cost or with other offsetting environmental or energy benefits, special provisions are needed which encourage the development and use of new technologies, while ensuring that emissions will be minimized.

76 Fed. Reg. at 25,068-69.

## The Arguable Legal Deficiency in What EPA Has Proposed

In *Natural Res. Def. Council v. EPA*, 489 F.3d 1363 (D.C.Cir. 2007), the D.C. Circuit rejected an effort by EPA to extend by one year the compliance date for emissions standards established in 2004 in light of what EPA characterized as substantial changes made in the 2006 version of the rule at issue. The Court relied on the plain language of the CAA, Subsection 112(i)(3)(A), that after the effective date of any [Section 112] emission standard, limitation or regulation, the Administrator shall establish a compliance date or dates: “which shall provide for compliance as expeditiously as practical but in no event later than 3 years after the effective date of *such standard* ....” *Id.*, at 1373 (emphasis in original).

The D.C. Circuit read the phrase “such standard” as meaning the effective date of a Section 112 emission standard. Accordingly, it rejected EPA’s argument that extensions of compliance should be allowed when EPA determines that substantial changes and amendments to the rule have been made. *Id.*, at 1374.

The reasoning of *Natural Res. Def. Council* was followed in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008). In dealing with EPA’s attempt to exempt major sources from compliance with Section 112 emissions standards during startups, shutdowns, and malfunctions, the Court rejected EPA’s claim that it retained discretion: where “Congress explicitly enumerate[d] certain exceptions to a general prohibition, additional exceptions are not to be implied, in the absence of the contrary legislative intent.” *Id.*, at 1028 (*quoting Natural Res. Def. Council*, 489 F.3d at 1374).

Finally, the specific and somewhat limited rationale for the “reset” of the compliance deadlines as set forth by EPA in the preamble to the proposed revision to the original Boiler Rule

is virtually the same rationale that was recently rejected in *Sierra Club v. Jackson*, Case No. 11-1278, 2012 WL 34509, at \*16-20 (D.C. Cir. Jan 9, 2012). Accordingly, it is likely that environmental groups will contend that EPA's actions in resetting the time clock are both unauthorized under the CAA and arbitrary and capricious under the APA.

### **What EPA Should Do to Properly Set the Compliance Schedule in a Way That Is Consistent with the CAA and the APA**

What EPA should do is exercise its authority under the APA, 5 U.S.C. §§ 551(5) and 553(c), to propose to “repeal” the original Boiler Rule promulgated on March 21, 2011 in its entirety, and then after receipt of comments on the proposal, proceed to repeal the original Boiler Rule in its entirety. Instead of reconsidering that rule, EPA should promulgate a new final Boiler Rule containing the corrected standards and containing compliance deadlines consistent with the three plus one year provisions of Section 112 of the CAA, starting on the effective date of the new rule.<sup>4</sup>

It is certainly true that,

“When an agency acts to rescind a standard it previously adopted, a reviewing court will subject that rescission to the same level of scrutiny applicable to the agency's original promulgation.”

*Association of Public-Safety Comm. Officials-Int'l, Inc. v. F.C.C.*, 76 F.3d 395, 398 (D.C. Cir.1996) (citing *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 41, 103 S.Ct. 2856 (1983)).

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<sup>4</sup> What EPA should do is not to attempt to “postpone” or “reset” compliance dates that were triggered by the original promulgation of the Boiler Rule on March 21, 2011, as part of any “reconsideration” of certain provisions of final rule. Attempting to do so will likely run afoul of the plain language of the CAA and the above noted D.C. Circuit cases.

To justify the rescission of the original Boiler Rule in its entirety and the promulgation of a new Boiler Rule, EPA needs to say more than simply “industry needs the time.” It needs also to point to societal benefits that will be lost if EPA does not act to rescind the original Boiler Rule and promulgate a new rule. A principal societal benefit of that approach will be the restoration of the opportunity that would otherwise be lost for the deployment of innovative multi-pollutant removal technologies that have numerous benefits. In capital-intensive industries involving long lead times, industrial companies operating major sources need time to evaluate new technology. They need also to try to adapt strategies that reflect the need to control multiple pollutants being covered by different EPA rulemakings.

As noted above, there is a strong Congressional policy favoring the adoption and employment of new technology such as Eco Power’s COMPLY 2000<sup>®</sup> technology, and EPA has recognized and sought to accommodate that need in the EGU Rule. The benefits of multi-pollutant removal technology are not only that it achieves multi-pollutant control and reduces CO<sub>2</sub> emissions by between 10% and 15% without sequestration, but it also avoids the collateral harm to the environment caused by conventional emission control technology. So for example, Eco Power’s COMPLY 2000<sup>®</sup> is at least as effective as conventional wet flue gas desulfurization (WFGD) for SO<sub>2</sub> and selective catalytic reduction (SCR) for NO<sub>x</sub>.<sup>5</sup> Unlike WFGD, however, Eco Power’s technology does not increase CO<sub>2</sub> emissions (*see* Available and Emerging Technologies for Reducing Greenhouse Gas Emissions From Coal-Fired Electric Generating

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<sup>5</sup> In its study of Applicability and Feasibility of NO<sub>x</sub> and SO<sub>2</sub> and PM Emissions Control Technologies for Industrial, Commercial and Institutional Boilers (ICI) the Northeast States for Coordinated Air Usage Management (NESCAUM November 2008 revised January 2009) assumed higher than 90% NO<sub>x</sub> reduction for SCR (NESCAUM Sec. 3.1 at 3-2) and 90% - 95% SO<sub>2</sub> removal for WFGD but only 70% - 90% for dry scrubbers (NESCAUM Sec. 3.6 at 3-12). NESCAUM did not provide comparative data for mercury reduction. As noted above, Eco Power’s COMPLY 2000<sup>®</sup> achieves greater reduction in all of the above pollutants.

Units, Office of Air and Radiation, US Environmental Protection Agency, October 2010, p. 23) and unlike WFGD, it does not significantly increase water usage (EPA Draft BACT GHG Guidance, p. 41, fn. 99). Additionally the water pollution problems created by WFGDs have been widely reported in the news media (*see* Attachment 2 to these comments, “Cleansing the Air at the Expense of Waterways,” The New York Times, October 13, 2009). In contrast to WFGDs, COMPLY 2000<sup>®</sup> consumes and discharges smaller amounts of water due to the nature of its process and, as noted above, reduces CO<sub>2</sub> by 10% - 15% without sequestration. EPA should spell out these reasons in detail in justifying its rescission of the Boiler Rule in its entirety.

Another important rationale for taking the proposed action is that failure to do so (i.e. failure to rescind the original Boiler Rule and propose an entirely new rule (based on the values set forth in the proposed reconsideration) would lock American heavy industry into obsolete, expensive, piecemeal emission control technologies for decades to come. Instead of encouraging the modernization of industrial processes using major industrial boilers, EPA’s proposed approach will have the unintended consequences of long term damage to the competitiveness of American heavy industry, with all its implications for loss of jobs and increased trade deficits that must over time increase inflation.

In summary, the Congressional policy of encouraging innovation, the need to minimize the adverse environmental impacts inherent in conventional single pollutant emission control technologies, and the need to help encourage modernization of American heavy industry and avoid loss of jobs and worsening inflation, are all societal benefits that the Agency should point to as amply justifying the rescission in its entirety of the original Boiler Rule and the promulgation of a new major source industrial boiler rule.

We appreciate the opportunity that the Agency has given to provide comments and if the Agency has any questions about these comments or about COMPLY 2000<sup>®</sup> technology, please contact Tom Bartolomei, Chief Executive Officer, Eco Power Solutions, 1266 Furnace Brook Parkway Suite 401, Quincy, MA 02169, (617) 706-2656, [tom.bartolomei@ecopowersolutions.com](mailto:tom.bartolomei@ecopowersolutions.com) or Norman W. Bernstein, Member, N.W. Bernstein & Associates LLC, 800 Westchester Ave. Suite N319, Rye Brook, NY 10573, (914) 358-3500, [nwbernstein@nwblc.com](mailto:nwbernstein@nwblc.com).