UNITED STATES CLEAN HEAT & POWER ASSOCIATION

February 21, 2012

EPA Docket Center No. EPA-HQ-OAR-2006-0790
Air and Radiation Docket and Information Center
Environmental Protection Agency
Mail Code: 2822T, 1200
Pennsylvania Ave., NW, Washington, DC 20460

Comments on Proposed Rule, Reconsideration of Final Rule: National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers, 76, Fed. Reg. 80532 (Dec. 23, 2011)

Dear Administrator Jackson:

Thank you for the opportunity to comment upon and commend the December 23, 2011 adaptations in the Reconsideration of Final Rule for Area Sources: Industrial, Commercial, and Institutional Boilers.[1]

On behalf of the combined heat and power industry, the U.S. Clean Heat & Power Association (USCHPA) commends the steps that were taken to move in the directions that facilitate the enhanced utilization of combined heat and power.

However, there is still work to be done and we suggest herein further simple modifications and refinements in response to the only areas open for comment, i.e. the items included in IV. Discussion of Issues for Reconsideration and V. Technical Corrections and Clarifications[2] and their cross-references elsewhere.

USCHPA Is A Party At Interest

USCHPA is a trade association whose membership includes manufacturers, suppliers, and developers of combined heat and power (CHP) systems. The Final Rule will affect the existing CHP systems as well as new CHP, in both instances including where employed waste heat recovery (WHR) systems.[3] USCHPA is definitely a party at interest.

USCHPA's specific comments are attached. If there are questions EPA may contact Ruben S. Brown, M.A.L.D., President, The E Cubed Company, LLC at brown@ecubedllc.com.

[1] Today, February 21, 2012 the USCHPA has filed similar comments in Docket No. EPA-HQ-OAR-2002-0058

[2] (76 FR 80606-80620)

[3] Hereinafter CHP will refer to both CHP and WHR.

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Thank you for the opportunity to comment.

Very truly yours,

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EPA-HQ-OAR-2002--0790

Specific Comments Due February 21, 2012
by the US Clean Heat and Power Association (USCHPA)
On Proposed Rule,
Reconsideration of Final Rule: National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 76, Fed. Reg. 80532 (Dec. 23, 2011)

The U.S. Clean Heat & Power Association (USCHPA) proposes herein simple modifications and refinements in response to the only areas available for comment, i.e. the items included in IV. Discussion of Issues for Reconsideration and V. Technical Corrections and Clarifications[4] and their cross-references elsewhere.

Background Perspective On Combined Heat and Power

Combined Heat and Power (CHP) is the simultaneous generation of electricity and useful thermal energy. Currently supplying eight percent (8%) of U.S. generating capacity, CHP systems can reach efficiencies above eighty percent (80%). There is approximately 82 GW of CHP installed in the U.S. Industry estimates indicate the technical potential for additional CHP at existing sites in the U.S. is between 130 and 170 GW, plus an additional 10 GW of waste heat recovery CHP. This represents heat and power generating capacity that is readily available, provided policies are established to support further CHP deployment.

CHP lowers demand on the electricity delivery system, reduces reliance on traditional energy supplies, makes businesses more competitive by lowering their energy costs, reduces greenhouse gas and criteria pollutant emissions, and refocuses infrastructure investments toward next-generation energy systems.

> Using CHP today, the United States already avoids more than 1.8 Quadrillion British thermal units (Quads) of fuel consumption and 241 million metric tons of carbon dioxide (CO2) emissions annually compared to traditional separate production of electricity and thermal energy. This CO2 reduction is the equivalent of removing more than 45 million cars from the road. In addition, CHP is one of the few options in the portfolio of energy alternatives that combine environmental effectiveness with economic viability and improved competitiveness. [5]

Already harnessed by many industrial, commercial, and institutional facilities, CHP is a proven and effective energy resource that can be immediately deployed to help address current and future global energy needs by incorporating commercially available and domestically produced technology.

[4] (76 FR 80534-80542)

[5] Oak Ridge National Laboratory, Combined Heat And Power, Effective Energy Solutions for a Sustainable Future, December 1, 2008, ORNL/TM-2008/224. P3. ORNL's data cites 1.9 quads of fuel savings and 248 MMTs of CO2 savings based upon 85GW deployed. The lower numbers represent current estimates based upon 82GW deployed.

Specific Comments

Selected comments are addressed in the order of occurrence from page 76 FR 80534 to 76 FR 80542 (Discussion of Issues for Reconsideration and Technical Corrections and Clarifications)

C. Initial Compliance Schedule for Existing Boilers (76 FR 80535)

USCHPA- EPA now proposes that all existing boilers subject to the tune-up requirement would have two years (by March 21, 2013) in which to demonstrate initial compliance. EPA is requesting comment whether this should be extended to three years. Consistent with USCHPA's comments in the Major Source's Docket filed today February 21, 2012 we support the extension to three years.

F. Averaging Times (76 FR 80536)

USCHPA – The EPA has determined that the 30-day rolling average for parameter monitoring and demonstration of continuous compliance with operating limits is appropriate for this rule. From review of studies the EPA expects that variability of long term emissions averaging will be about half that represented by the short term testing proposed in the Final Rule (12-hour block). We agree that using the 30-day rolling average will reduce overall variability.

H. Tune-Up Work Practices (76 FR 80536)

2. Conducting Initial Tune-ups at New Sources (76 FR 80536)

USCHPA – We agree with EPA that decreased frequency of tune-ups is appropriate. For new sources we believe that is correct to remove the requirement for the initial tune-up. Representing OEMs we agree that new units will be typically tuned during the startup process. If the applicable biennial (>MMBtu/h) or five year (<= 5MMBtut/h) tune-up schedule is set it is acceptable that it should occur no later than 25 months or 61 months respectively after the initial startup.

H. Energy Assessment (76 FR 80537-80538)
1. Scope (76 FR 80537)

USCHPA – EPA proposes to restrict the energy assessment to sources and uses (our terms) on-site. USCHPA questions this. USCHPA also questions the limitation to rely on a two-year or less payback criterion. Many capital investments, including combined heat and power systems, typically have longer payback periods, considering all benefit streams (both thermal and electricity). This should be reconsidered and broadened to permit greater aggregation of benefit streams. For example, Federal, State and even local tax credits should be applied to the benefit side of the calculation.

Removing the benefit obtained by reducing electricity purchases can undermine unnecessarily the benefits of CHP installations, especially one-off installations.

Unfortunately when CHP is involved, this approach will undervalue the benefit of the CHP system, both in energy savings and in emissions reductions.

As indicated earlier, CHP has off-site benefits because the site doesn't have to buy so much electricity from "away." The energy savings and the CO2 avoidance in the quotation from Oak Ridge National Laboratory cited above and referenced in fn 5 is based upon avoidance of energy

consumption both at the site and away.

Remember that the existing CHP fleet (82 GW) already avoids more than 1.8 Quadrillion British thermal units (Quads) of fuel consumption and 241 million metric tons of carbon dioxide (CO2) emissions annually compared to traditional separate production of electricity and thermal energy. This CO2 reduction is the equivalent of removing more than 45 million cars from the road. The potential additional CHP of 130-170 GW could double these benefits for the additional installations in terms of fuel consumption and CO2 reduction.

Fortunately these benefits can be readily calculated for CHP projects at relatively low cost during the Energy Assessment Phase. We realize that cost of the Energy Assessments is an important factor in EPA's analyses. However, a ready tool developed by EPA already exists. It is the CHP Emissions Evaluator available from EPA's CHP Partnership.[6]

Using a tool such as the CHP Emission Evaluator, even if it requires some modification for the purpose, should not significantly raise the average energy assessment costs.

2. Compliance Date (76 FR 80535-80536)

USCHPA- Because emission standards compliance must be met by the compliance date and that date is now set at March 21, 2014 it is appropriate that the Energy Assessment for existing sources be completed by the compliance date of March 21, 2014.

3. Maximum Duration Requirements (76 FR 80538)

USCHPA - The shorter assessment time period is better, i.e. changing the maximum time from 1 day to 8 technical hours and from 3 days to 24 technical hours.

V. Technical Corrections and Clarification 76 FR 80538

A. Electric and Residential Boilers (76 FR 80539)

USCHPA – EPA has proposed that residential boilers not be subject to Part JJJJJJ and is proposing to define residential boiler as follows:

> A residential boiler would be defined in 40 CFR 63.11237 as:
> ''* * * a boiler used to provide heat and/or hot water used by the owner or occupant of a dwelling designed for and used for not more than four family units. This definition includes boilers used primarily to provide heat and/or hot water for a dwelling containing four or fewer families located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm).''[7]

[6] http://www.epa.gov/chp/basic/calculator.html

[7] **(76 FR 80539)**

This is similar but not the same as the related provision offered for comment in the Major sources proposals for reconsideration.[8] We introduce it to promote harmony and make the same recommendation for both rulemakings.

Congress encouraged exploration of the use of small-scale combined heat and power in residential heating appliances in EPACT (2005) Section 923.[9]

USCHPA is cognizant that advances in residential micro-combined heat and power technology have led since 2005 to the installation more than 120,000 systems in residences globally. These systems function with the heat/or hot water system. The description above aptly applies to these installations. We recommend that the definition be modified by the insertion of the words ***"and/or as part of a residential combined heat and power system" after the words "hot water".*** **This is similar to the change to related provisions 76 FR 80616 that we proposed in our Major Source Comment of February 21, 2012.[10]**

> A residential boiler would be defined in 40 CFR 63.11237 as: ''* * * a boiler used to provide heat and/or hot water ***and/or as part of a residential combined heat and power system*** used by the owner or occupant of

[8] *Residential boiler* means a boiler, used in a dwelling containing four or fewer family units, to provide heat and/or hot water. This definition includes boilers used primarily to provide heat and/or hot water for a dwelling containing four or fewer families located at an institutional facility (*e.g.*, university campus, military base, church grounds) or commercial/industrial facility (*e.g.*, farm). Major Source Proposed Rule 76 FR 80616[8]

9 42 USC § 16213 - MICRO-COGENERATION ENERGY TECHNOLOGY

[10] *Residential boiler* means a boiler, used in a dwelling containing four or fewer family units, to provide heat and/or hot water **and/or as part of a residential combined heat and power system**. This definition includes boilers used primarily to provide heat and/or hot water for a dwelling containing four or fewer families located at an institutional facility (*e.g.*, university campus, military base, church grounds) or commercial/industrial facility (*e.g.*, farm). Major Source Proposed Rule 76 FR 80616 See comment filed by the USCHPA.

> a dwelling designed for and used for not more than four family units. This definition includes boilers used primarily to provide heat and/or hot water for a dwelling containing four or fewer families located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm).''[11]

40 CFR 63.11195 Add new definition of ''residential boiler"

USCHPA – See our recommendations above at the discussion on 4. Residential Unit Exemption (**75 FR 80539**). Insert the clause "and/or as part of a residential combined heat and power system" after the first appearance of the words "hot water"

[11] **(76 FR 80539)**