

October 27, 2014

U.S. Environmental Protection Agency
Attention Docket ID No. EPA-HQ-OAR-2013-0602
Mail code 28221T
1200 Pennsylvania Ave. NW.
Washington, DC 20460.



Via email: a-and-r-docket@epa.gov
Attention Docket ID No. EPA-HQ-OAR-2013-0602

Re: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, EPA-HQ-OAR-2013-0602, 79 Fed. Reg. 34830 (June 18, 2014)

Dear Administrator McCarthy,

Our organizations represent interests from the environmental, efficiency, research and development, and manufacturing communities. While we have different positions on the emission targets in the Proposed Carbon Pollution Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Carbon Guidelines) – and some of our organizations will be submitting more detailed comments on a separate basis – we are united in our support for combined heat and power (CHP) and waste heat to power (WHP) as valuable tools to reduce greenhouse gas emissions.

By producing both heat and power from a single fuel source (CHP) and by capturing otherwise wasted heat from industrial processes to generate additional electricity (WHP), CHP and WHP are significantly more efficient than central power generation. CHP and WHP are proven and demonstrated approaches to lower emissions, make U.S. manufacturers more competitive, and enhance electric reliability. The Administration recognizes these benefits and has established a national goal to encourage greater deployment of CHP and WHP. If the final rule continues to rely on a system-wide approach to emission reductions, our organizations offer the following three recommendations to strengthen and improve the proposal:

- I. EPA should clarify that CHP and WHP at unaffected units are eligible compliance strategies for EGUs;
- II. Several modest changes are needed to ensure the Rule recognizes CHP's and WHP's benefits for affected units; and
- III. EPA should provide guidance to states to enable them to most effectively incorporate CHP and WHP into their compliance plans to reduce emissions from unaffected units.

I. EPA Should Clarify that CHP and WHP at Unaffected Units Are Eligible Compliance Strategies for EGUs

EPA should clarify that CHP qualifies as an efficiency resource in the proposed rule. EPA should also clarify that WHP produces no incremental carbon emissions. It is not clear that references to energy efficiency in the proposed rule include CHP, nor that references to low and zero-carbon resources include WHP. CHP is mentioned once as an example of “demand-side energy efficiency,”¹ and WHP is not mentioned at all. The Rule should explicitly acknowledge that the use of these technologies at unaffected units is an eligible compliance strategy for EGUs and elaborate their environmental, economic, and reliability benefits. Explicit recognition of CHP and WHP will send a signal to states that they can and should include these technologies in their compliance plans. Absent this, states are unlikely to look beyond the policies included in the building blocks.

II. Several Modest Changes Are Needed to Ensure the Rule Recognizes CHP and WHP’s Benefits

1. EPA Should Provide a Full Thermal Credit for Affected CHP Units

CHP’s chief benefit is that it can produce heat and electricity from a single fuel source. The proposed rule would credit all of the electricity produced from a CHP system, but only 75 percent of the useful thermal output. EPA invites comment on “a range of two-thirds to 100 percent credit for useful thermal output in the final rule to better align incentives with avoided emissions.”² To fully account for the benefits of CHP’s energy efficiency, the rule should credit 100 percent of an affected facility’s useful CHP thermal output.

There is precedent supporting a 100 percent thermal credit. For instance, EPA has recognized 100 percent of thermal output in the NSPS for Stationary Combustion Turbines.³ A 100 percent credit has likewise been applied in several states.⁴ Notably, the Proposed Stationary Combustion Turbine Rule favorably cites Texas’ permit-by-rule regulation, which gives facilities 100-percent credit for steam generation thermal output.⁵

We understand that it may be appropriate to discount thermal output where there are concerns that the thermal energy is not being accurately measured or properly used. Such concerns do not exist here. The proposed rule includes strict monitoring requirements for CHP systems.⁶ It further limits eligibility to CHP systems where “20.0 percent of the total gross useful energy

¹ U.S. EPA, June 2, 2014, 79 Fed. Reg. 34830, 34888, “Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units” (“large energy users might independently see additional energy efficiency opportunities or opportunities for self-generation using options such as combined heat and power, solar, or power purchase agreements...”).

² 79 Fed. Reg. at 34914.

³ See New Source Performance Standard (NSPS) for Stationary Combustion Turbines (40 CFR Part 60, Subpart KKKK) (crediting 100% of thermal output); New Source Performance Standard (NSPS) for Electric Utility Steam Generating Units (40 CFR Part 60, Subpart Da) (crediting 75 percent of thermal output from CHP systems).

⁴ See U.S. EPA, CHP Partnership, Feb. 2013, *Accounting for CHP in Output-Based Regulations*, at 7-9 (citing California’s multi-pollutant regulations and Texas permit by rule and standard permitting program) (<http://www.epa.gov/chp/documents/accounting.pdf>).

⁵ 70 Fed. Reg. 8314, at 8318 (Feb. 18, 2005).

⁶ See, e.g., 79 Fed. Reg. at 34955 (§ 60.5805); 79 Fed. Reg. at 34913.

output consists of useful thermal output.”⁷ These requirements should alleviate any concerns about so-called “sham” CHP projects.

This matter has important implications for state compliance plans. While only a handful of existing CHP and WHP systems are large enough to be directly affected by the Carbon Guidelines, the proposed rule offers states the flexibility to credit emission reductions from smaller units in their state plans. States will look to EPA’s treatment of thermal output from affected units as a guide for the appropriate treatment of these systems in their compliance plans and underlying policies (e.g., portfolio standards). Absent proper consideration of their thermal output, states will underestimate the emissions benefits of CHP units.

Notably, the proposed rule seeks comment on the appropriate thermal credit “to better align incentives with avoided emissions.”⁸ As noted above, the Administration has supported numerous policies to encourage greater CHP and WHP deployment. Providing a full – 100% – thermal credit would place the Carbon Guidelines squarely in line with these broader deployment goals.

2. EPA Should Provide a More Generous Line-Loss Credit

By producing electricity on site, CHP and WHP reduce the burden on transmission and distribution lines used to transport power from a central generator. EPA appears to recognize this benefit and includes a five-percent line-loss credit for affected CHP systems. For CHP facilities, net energy output is defined as “the net electric or mechanical output from the affected facility divided by 0.95, plus 75 percent of the useful thermal output.”⁹ There is no explanation for why output is “divided by 0.95”; however, the Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units (111(b)) explicitly provided a 5 percent “line loss credit” for CHP systems “to account for a five percent avoided energy loss in the transmission of electricity.”¹⁰

We agree that a discount for avoided electricity losses through transmission and distribution is warranted; however, we believe that the proposed credit is inadequate. As a practical matter, average national transmission and distribution losses are 6 percent.¹¹ Thus, if EPA includes CHP and WHP in the final rule, we urge it to increase the discount factor from 5 percent to at least 6 percent to reflect average avoided line losses from these systems.

We also urge EPA to eliminate any ambiguity surrounding the line-loss credit. As written, this credit only applies to a subset of existing CHP systems that are directly affected by the Rule. States will consider EPA’s approach, however, when determining how to account for output from CHP and WHP systems in their compliance plans. For this reason, EPA should elaborate on CHP and WHP’s transmission and distribution benefits and encourage states to apply a similar line-loss credit when accounting for CHP and WHP installations at unaffected units that

⁷ 79 Fed. Reg. at 34956-57.

⁸ 75 Fed. Reg. at 34914.

⁹ 79 Fed. Reg. at 34956-57.

¹⁰ U.S. EPA, Jan. 8, 2014, 79 Fed. Reg. 1430, 1448, “Proposed Rule: Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units.”

¹¹ U.S. Energy Information Administration, Frequently Asked Questions: How much electricity is lost in transmission and distribution in the United States? (reporting “about 6%”) (<http://www.eia.gov/tools/faqs/faq.cfm?id=105&t=3>) (visited May 9, 2014).

the states will rely on to meet the Carbon Guidelines. These benefits are consistent with EPA's stated interest in "ensur[ing] electric system reliability."¹²

3. EPA Should Provide Assurances to CHP and WHP Hosts.

If the final rule continues to apply a system-wide approach, states will seek to achieve their emission targets through off-site energy-efficiency investments. Under such an approach, hospitals, universities, manufacturing facilities, and others could help reduce emissions throughout the air shed by installing CHP and WHP systems. While these investments will reduce regional emissions, because these facilities are now producing electricity on site, their own emissions will modestly increase. To encourage these investments, EPA should find a way to assure hosts that actions taken by facilities that are not directly covered by the rule to help states comply with the Carbon Guidelines will not adversely affect them under any potential future carbon pollution NSPS for another sector.

III. EPA Should Provide Guidance to States to Enable them to Most Effectively Incorporate CHP and WHP into their Compliance Plans.

The proposed rule sets emissions targets, but allows states to determine the best way to achieve them. While EPA has said that states can go beyond the building blocks to achieve their targets, it does not explain how CHP and WHP at unaffected units might fit into a state plan. To the contrary, some of EPA's public materials on the Clean Power Plan do not even list CHP or WHP as an example of a potential state compliance measure.¹³ EPA should ensure that states are aware that CHP and WHP are valuable compliance tools and provide appropriate guidance for states to include policies that support their deployment in their compliance plans. EPA acknowledges that it "intends to develop guidance for evaluation, monitoring, and verification (EM&V) of renewable energy and demand-side energy efficiency programs and measures incorporated in state plans."¹⁴ It is not clear whether this commitment encompasses programs that advance CHP and WHP. In particular, states will need model rules detailing the best way to include CHP and WHP in renewable portfolio and energy efficiency standards and guidance on how to appropriately credit CHP output. These written materials can be supplemented with a CHP and WHP conference for states and other stakeholders involved in developing compliance plans.

¹² 79 Fed. Reg. at 34833.

¹³ See, e.g., U.S. EPA, "EPA Fact Sheet: Clean Power Plan, National Framework for States" (<http://www2.epa.gov/sites/production/files/2014-05/documents/20140602fs-setting-goals.pdf>) (visited Sept. 10, 2014).

¹⁴ 79 Fed. Reg. at 34909.

CONCLUSION

We appreciate the Administration's growing recognition of CHP and WHP. These technologies offer a proven, cost-effective way to reduce emissions while enhancing manufacturing competitiveness and electric reliability. We believe there are significant opportunities to increase CHP and WHP deployment in the nation's hospitals, universities and factories. The modest changes detailed in these comments will support additional investments in CHP and WHP and we urge EPA to consider these recommendations as the Rule moves forward.

Sincerely,

Advanced Energy Economy (AEE)
Alliance for Industrial Efficiency
Alliance to Save Energy (ASE)
American Council for an Energy-Efficient Economy (ACEEE)
American Gas Association (AGA)
American Public Gas Association (APGA)
Center for Neighborhood Technology (CNT)
Gas Technology Institute (GTI)
Heat is Power Association (HiP)
United Steelworkers (USW)