

# CIBO Environmental Update

## Video Conference

Sept. 21, 2020

- I. Introductions – **Tom Webster**, DuPont, *Environmental Committee Chairman*  
**Kristine Davies**, Trinity Consultants, *Environmental Committee Vice-Chairman*

Tom and Kristine introduced themselves and went over the basic outline of the meeting. Tom pointed out that there were a substantial number of issues confronting member and potential member companies. These issues will persist no matter who wins the upcoming presidential election. Candy Marriott emailed the 10 page list to the committee. There were a total of 34 attendees.

- II. CSAPR Remand Update – **David Flannery**, Steptoe & Johnson for MOG

David pointed out that there have been a number of attempts to address the ozone issues (NOx SIP Call, CAIR, CSAPR, CSAPR Remand, and CAA 126). However, there are still ongoing issues. There are “Good Neighbor Requirements” which involve state SIPs. If a state SIP is not adequate, EPA can issue a FIP. Otherwise, EPA can rely on transport rules, such as CAIR and CSAPR, or Section 126 petitions. Upwind states are obligated to eliminate all and only emissions meeting the following two criteria:

Emissions contribute 1% or more to downwind NAAQS (later changed to 1 ppb)

The emissions could be eliminated cost effectively

Cost effectiveness would be determined by EPA’s Control Analysis. This methodology would calculate the quantity of emissions that could be eliminated at various cost thresholds. Then the impact of the reductions would be modeled for downwind areas. From this impact curve, a significant cost threshold would be estimated. In 2016, EPA made such a calculation and concluded that \$1400/ton was cost effective. The curve that was produced showed a fairly distinct break, or “knee”, in the curve where further reductions did not produce much downwind impact.

In 2018, EPA modeling for 2023 showed no downwind non-attainment for the 2008 NAAQS. From this result, EPA concluded there was no need for further controls on EGUs or non EGUs. However, the Wisconsin court decision disagreed and stated that EPA should have looked at 2021 instead of 2023.

On remand, EPA was directed to look at non EGUs as well to obtain a more complete remedy. The court did agree with EPA’s assessment of short term controls and adoption of the ozone season NOx trading program.

After Wisconsin came the Maryland and New York section 126 petitions. EPA rejected the New York petition. In the Maryland case, the EGU SCR controls were upheld. The EGU non SCR was remanded. The 2021 data year was required for both the 2008 and 2015 NAAQS. In the New York case, the EGU short term controls were upheld. The long term EGU controls and non EGU controls were remanded. New Jersey sued EPA over failure to issue FIPs for 20 states that had not completed their SIPs. Kentucky has an approved good neighbor SIP.

EPA proposed a deadline of 3/15/21 for the short term controls and 3/15/22 – 12/15/22 for the long term controls. EPA noted that there were 81,000 non EGUs and needed time for proper evaluation. The court ordered a final action deadline of 3/15/21 towards the end of July. EPA has indicated that it could come up with rule by 3/15/21, but has not ruled out an appeal.

For the short term controls another curve can be constructed, leading to an effective cost threshold. For the longer term, EPA would assess additional controls leading to a final EGU rule on 3/15/22 and a final non EGU rule on 12/15/22.

EPA has not made clear how they will evaluate of the data needed to meet the 3/15/21 deadline for the long term controls. West Virginia submitted a good neighbor SIP in 2015. They did not use the 1 ppb impact, but rather the 1% impact (0.75 ppb). They concluded that no additional, highly cost effective controls are available. They looked at both EGUs and non EGUs.

Going forward, it is expected that EPA will required that EGUs with SCRs may be required to operated them more often and/or at higher levels of control. Part of the problem is that grid prices for generation have declined and allowance values have also declined. This situation makes over control less attractive to generating facilities.

For short term controls, essentially additional ammonia injection costs would be compared to the current allowance price to determine if excess control was economically worthwhile. Studies typically use an average allowance value over the 5 month ozone season. There is particular concern over high energy demand days (HEDD) when temperatures are high and ozone tends to be high as well. EPA has not signaled how it will handle non EGUs. It is expected that the EPA proposal will be in the federal register by around Nov. 1.

### III. Pennsylvania Presumptive NO<sub>x</sub> RACT – **Gary Merritt**, Northern Star Generation Services Co. LLC

Pennsylvania has a general emission standard of 0.2 lb/MMBTU for NO<sub>x</sub> RACT. Also, on startup, plants were allowed to wait for the SCR to come up to temperature before starting ammonia addition. However, many plants did not have an online inlet temperature monitor. In the past, some plants had achieved lower NO<sub>x</sub> emissions when power prices were higher and SO<sub>2</sub> emissions reductions requirements were lower.

Maryland cited two CFB plants (one has since retired) that made 0.16 lb/MMBTU and the Seward plant, which made 0.1 lb/MMBTU. For the CFBs, calcium acts as a catalyst for NO<sub>x</sub> formation. With more stringent SO<sub>2</sub> requirements, more limestone is needed to reduce SO<sub>2</sub>, which, in turn, tends to increase NO<sub>x</sub>. Further, with lower power prices and lower allowance

values, the economics of adding SNCR for additional NOx control become worse. The Pennsylvania NOx RACT standard has been remanded with the state required to issue a new standard that is “technology forcing”. Also, inlet temperature monitors will be required to determine when the SCR is up to temperature in order to minimize the amount of time that the SCR is not operating.

IV. Boiler MACT Revisions – **Kristine Davies**, Trinity Consultants, Inc.

Kristine noted that EPA has proposed revised Boiler MACT standards for 34 different categories/HAPs with a 3 year compliance date (both new units and existing units). The majority of these changes have to do with biomass firing. The CO standard was not changed. EPA provide a much better clarification of why and how it arrived at the 130 ppm standard. There were also a number of “technical corrections/clarifications”.

V. Other Issues – **Tom Webster**, DuPont

Tom noted that 24 states have joined the US Climate Alliance. Their goal is to phase out HFCs being used as refrigerants and to reduce GHG emissions by 26 – 28% from 2005 levels by 2025. States are adopting the EPA SNAP rules. We will get a regulatory update from Lisa Jaeger (Bracewell) at the next meeting.

Tom went over the list of issues (legislative, regulatory, energy, and technical) as well as the services CIBO offers with regard to these issues. The committees and task groups as well as the conferences and meetings were also listed.

With regard to GHG issues, it was pointed out that you need to know what emission you have before your commit to what emission you will reduce. As a reminder, this issue was brought home with the initial set up of the EU trading system for GHGs. The EU did not have a good knowledge of their actual emissions. In the first trading period, they issued too many allowances. As the deadline for submitting allowances to cover emissions drew near, there was an abundance of allowances to cover the emissions and the price dropped to zero. The EU has since made adjustments to both reduce the number of allowances issued and to set a minimum price.