

Special Considerations for Boiler Controls at Paper and Pulp Mills

It is expected that among the membership of the American Forest and Paper Association (AF&PA) will be a number of paper and pulp mills that fall into one of two BART categories: either the “kraft pulp mill” category or the “fossil-fuel boilers of more than 250 million BTUs” category (or both categories). Therefore, AF&PA provides the following points for consideration by the states with BART-eligible paper and pulp mills:

Economic Considerations Related to Paper and Pulp Mills¹

1. Paper and pulp mills are large, complex, and have integrated manufacturing operations.
2. These mills cannot pass along cost increases because prices are determined by the world market.
3. Expected growth is an anemic 1% - 100 mills have closed in the last 6 years. 90% of increased demand will be met by imports.

Boiler Use in Paper and Pulp Mills is Unique¹

4. Boilers at paper and pulp mills have many designs and sizes, and wide, rapid load swings to meet dozens of steam uses, unlike most other boilers. Steam is used in the operation of pulp digesters, paper machines, etc.
5. Rapid load swings make it particularly difficult to retrofit boilers with SCR or SNCR, as appropriate temperature windows are hard to maintain. SCR has not been demonstrated on multi-fuel boilers burning wood or coal.
6. These boilers have diverse fuel profiles (biomass, coal, fuel oil, tires, natural gas, often fired simultaneously in the same unit).
7. States need to be careful to avoid:
 - A. creating disincentives to burning biomass in boilers (burning biomass is environmentally preferable and renewable thereby displacing fossil fuels)
 - B. affecting the capability for Combined Heat and Power operations (paper and pulp mills are the largest CHP sector in the U.S.)
8. Recovery boilers are different from power boilers because of the nature of the fuel used (black liquor) and because their primary purpose is to recover pulping chemicals, not generate steam.

9. High % removal requirements for multi-fuel boilers burning coal, natural gas, or other fuels with biomass are technically infeasible or prohibitively expensive.

General Cautions When Considering Boiler Controls²

10. Controls for industrial boilers need to be considered on a case-by-case basis due to the variety of boiler types, sizes, fuels, and controls already in place.

11. All solid-fired boilers at facilities that are a “Major” source of HAPs must comply with Boiler MACT with a deadline of September 2007.

12. Regional Haze strategies should be focused on visibility improvement, not on the installation of controls across an industry sector or BART category. The installation of controls should only take place where the source is shown to contribute to visibility impairment.

¹Questions regarding paper and pulp mill operations or their use of boilers can be addressed to Glynn Rountree, AF&PA at 202-463-2762 or Glynn_rountree@afandpa.org.

²General questions regarding industrial boilers and controls can be addressed to Bob Bessette of the Council of Industrial Boiler Owners at 703-250-9042 or bessette@cibo.org.