Stakeholder Meeting
DOE-NETL Proposed Phase II Large Scale Mercury Control Technology Field Testing Program

September 12, 2002
Meeting Summary

A meeting was held in Arlington, VA on September 12 on DOE-NETL's plans to go forward with a second phase of field testing of advanced mercury control technology. The meeting was held in conjunction with the Air Quality III Conference and was attended by approximately 53 representatives from the coal and electric-utility industries, technology developers, EPA, and other interested parties (see attached attendees list).

Scott Renninger provided a brief overview of DOE-NETL's current mercury field testing program. A summary of the results from an earlier stakeholder meeting held in Washington on June 4 were also presented as a starting point for discussion to help design the scope of the second phase of testing including:

- coal types,
- plant size and configuration,
- length of testing, and
- application of Hg CEMs

After the presentation, the meeting was opened for questions and comment as summarized below.

1. Does DOE anticipate any funding from EPRI and EPA?

   DOE-NETL anticipates that EPRI will participate through tailored collaborations with its membership as they have in Phase I. We also expect EPA to continue to partner with DOE-NETL in the program, although the Agency may not provide co-funding. DOE-NETL will be the primary source of Federal funding for the Phase II solicitation.

2. Will these be multi-year projects?

   DOE-NETL anticipates (based on prior field-testing experience) many of the projects would be multi-year, and in fact, we would prefer seeing two or more sites proposed sequentially from one integrated prime contractor.

3. If the technology is not exactly commercial can it be offered?

   Yes. DOE-NETL is not looking for commercial technology, rather we are looking to test and evaluate advanced technology that would be ready for commercial demonstration by 2005 as a result of the proposed Phase II program.

4. DOE should consider allowing the testing of coal blends of PRB and eastern and western bituminous coals. It is also important that the plant sites chosen can demonstrate that they will have a dedicated coal source during the long-term test period to minimize changes in flue gas composition.

5. Will DOE consider non-U.S. sites that meet the selection criteria?

   DOE-NETL will review the financial assistance regulations concerning the selection of non-U.S. power plant sites for testing under the Phase II program.

6. It is suggested that DOE-NETL needs to look at maximizing the information obtained from the program in terms of its value to the electric-utility industry. Focusing on one sorbent for six months of testing may not be the best use of the funding that is available. It is suggested that DOE-NETL should test a given sorbent for no more than two months at a time.

7. Based on a DOE-NETL question about the definition of long-term testing, feedback was that one week is not enough and 2 months is appropriate.

8. It was suggested that DOE-NETL should allow for the purchase of coal on the spot market in order to evaluate the effects of coal characteristics on performance.

9. If DOE-NETL's objective is to lower the cost of sorbents, then the program should focus on novel sorbents rather than commercially available sorbents.

10. It was argued that some of the current field test sites are not representative of the majority of coal-fired boilers, particularly those with smaller ESPs. For smaller ESPs, high-carbon levels could cause opacity problems.

11. More research is need on fabric filter/baghouse burning PRB. Other test sites to consider should include plants burning PRB with smaller ESPs (using carbon injection).

12. Activated carbon injection is considered a stopgap removal technique until something better is found.

13. DOE comment: We would like to focus on ESPs for at least 30 days to make sure steady state has been obtained.

14. If the goal is to define balance-of-plant issues, DOE-NETL should consider testing up to 6 months. Research is needed in both longer term and shorter term; not everything needs to happen sequentially. Maybe DOE should consider choosing randomly among the selected projects to determine which will operate for longer periods in order to minimize total cost to DOE.

15. Many of the existing plant configurations may not be what we will see in the future, i.e. SDA+ FF may be preferred for (western) plants burning low sulfur fuels.

16. It may be hard for activated-carbon producers to justify increasing their capacity for only five years of sales (if some other technology replaces it in the market).

17. Would DOE-NETL consider novel technology/multi-pollutant control for new plants?

    The goal of the Phase II program is to test advanced technologies that can be retrofitted to existing plants. Technology that would only have application for new plants would not be of interest under this program.

18. Is there any interest in hot-side ESP (HESP) configurations? One utility representative stated that he likes the Clear Skies Initiative primarily because it has a trading provision (which he would use to offset emissions) for his HESP.

    DOE-NETL is interested in plant configurations that would representative of as large a segment of the existing fleet as possible.

19. The ability of SCRs to achieve high levels of Hg oxidation is still in question. Many plants are moving to SCR in the future. However, we get either really good oxidation or we don't. Similarly, we either get good collection with FGD or we don't. DOE-NETL should consider funding oxidation tests of all of the Hg catalysts out there. Maybe have a number of slipstreams at existing facilities with SCR that can be set up for months or years. This may effect the choice of catalyst when plants are changing out.

20. Does DOE-NETL have any mechanisms to facilitate cost sharing?

    No. DOE-NETL only specifies what level of cost-share is required. This is determined by scale, maturity of technology development, hardware requirements, etc.

21. DOE-NETL asked: Should unit size be specified?

    Response 1: DOE shouldn't specify test-size limitations.
    Response 2: Don't put size limitations because sorbent injection will be much more difficult on 600 MW than 100MW plant and that is what we want to see.

22. Are there going to be any opportunities to perform slipstream testing? If not, is there going to be another solicitation to address smaller, R&D projects?

DOE-NETL recognizes that for certain technologies the cost for full-scale testing would be prohibitive. Allowing for slip-scale testing under the Phase II program is being discussed and may be allowed.

23. Would DOE-NETL consider coal washing as a control technology?

    DOE-NETL might consider such a process as part of integrated strategy for further downstream control, but not as a standalone mercury control technology. This is being discussed internally.

24. DOE-NETL should consider allowing slip-steam testing.

25. One of the things that came out of the B&W scrubber injection project data was that much of the mercury was being found in the scrubber fines. This leads to the question about how much was being lost in the pyrite trap.

26. DOE-NETL should consider separate performance goals for different coal types since some technologies have not been applied to lignite coals.

27. It is recommended that DOE-NETL should come up with a facilitation mechanism to have utilities, researchers, vendors, etc. get together to enhance possible project relationships.

28. DOE-NETL asked: Is it feasible to expect multiple site proposals in which the tests would be run in parallel?

    Response: It will require a large team to be able to do multiple sites in parallel.

29. DOE-NETL stated that the solicitation would require mercury balances including collection and analysis of all byproduct solid and aqueous streams. The program will also require mercury S-CEMs or CEMs.

30. It will be expensive to collect and analyze all byproduct streams in order to achieve complete mercury material balances. DOE-NETL is encouraged to take this into consideration in developing the solicitation requirements.

31. DOE-NETL commented that those interested in the Phase II program should start thinking about their potential team.

32. What about re-emissions of mercury and other HAPS from carbon? For example, Cd, As, Se. Will DOE include measuring these other HAPS into the solicitation as requirements?

    DOE-NETL will take under advisement and decide closer to solicitation release.

33. Concern was raised that if DOE-NETL went with a solicitation with two closing dates there might not be any funds left for proposals submitted against the second closing date.

34. It was suggested that March 2003 be used as the first closing date. It was also suggested that the first closing date be January 2002 and the second in May 2003. This would allow DOE-NETL to initiate the program while allowing additional time for emerging technologies to be further developed as well as to provide more time for proposal teams to be formed.

35. DOE-NETL is encouraged to release the solicitation as soon as possible so that participants can start planning.

36. Would DOE-NETL be interested in a guaranteed single site with floating dates for follow-on test sites?

    DOE-NETL will consider this and will clarify its position in the solicitation.