

**From:** [Barbara McBride](#)  
**To:** [Barbara McBride](#); [Poloncarz, Kevin](#); [Alexander Prusi](#); [Rick Thomas](#);  
[Dan Ewan](#); [Alex Makler](#);  
**cc:** [William Ferguson](#);  
**Subject:** RE: Aux Boiler emissions cost effectiveness  
**Date:** Tuesday, March 31, 2009 8:27:29 PM  
**Attachments:** [Aux boiler-NOx-2.xls](#)

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Here is the cost effectiveness analysis. The only real input was the cost of the aux boiler at 2.2 million and the emissions. The remainder of the cost data is calculated based on EPA guidance and factors.

Alex P. Please let me know if the numbers look reasonable to you. The installed cost came out to be about 4.8 million which is not far off from the 5.7 million.

-----Original Message-----

From: Barbara McBride  
Sent: Tue 3/31/2009 10:05 PM  
To: poloncarz, Kevin; Alexander Prusi; Rick Thomas; Dan Ewan; Alex Makler  
Cc: William Ferguson  
Subject: Aux Boiler emissions

Here is the Aux Boiler emissions spreadsheet. I talked with Bill Ferguson today and we talked through the emissions and he agreed that on a cold start it would most likely be the second two hours that would be saved with an aux boiler. I used the emissions that Jim Mclucas put together to get the emissions since the assumed a 480 lbs NOx and 5028 lbs CO and a six hour cold start. We also discussed that during a warm start the aux boiler would just get it down to what the emissions would be during a hot start. I estimated the emissions savings from this by taking the warm start emissions data from our SU/SD spreadsheet and taking the difference in emissions from a hot and warm start. The number of start were made consistent with the SU/SD spreadsheet at 50 warm starts and 6 cold starts. The savings came out to be 12.4 tons of CO and 0.9 tons of NOx. The cost effectiveness analysis will follow shortly.

Alex can you please look at to see if you agree.