

From: MailVTGas 1
Sent: Apr 08, 2011 16:24:34
To: 'Matthew Stern'
Cc: 'Carey Rosser'; 'Michael Dworkin'
Bcc:
Subject: RE: Emissions calculation summary

Thank you so much. Can we touch base early next week? I just got out of an afternoon meeting and I need to grab my son and head to Maine for a college tour. I want to double check the whole BTU thing – that was one area I had someone check my math on earlier. I think the misunderstanding may be that in the gas world (unlike the Roman numeral world!) Mcf stands for thousand cubic feet, rather than million cubic feet.

Monday morning is wide open for me as is Tuesday between 1 and 4. Just let me know what works.

Enjoy your weekend!

From: Matthew Stern [mailto:mstern034@gmail.com]
Sent: Friday, April 08, 2011 2:54 PM
To: Eileen Simollardes
Cc: Carey Rosser; Michael Dworkin
Subject: Emissions calculation summary

Hello Eileen,

Carey Rosser and I have completed a check on your numbers and assumptions. There were a few issues that we made corrections on. Mainly, the calculation of Billion BTUs for the natural gas was missing the conversion factor from million cubic feet to BTUs, which we corrected. We made a similar correction, based on those numbers, for the total gallons of fuel displaced. We changed this calculation to the total BTUs of energy used by the natural gas fuel divided by the BTU/gallon of fuel oil listed. Please note that these values are very high. We are concerned that the number listed in C2, total load of Mcf might be off by a factor - perhaps actually representing cubic feet. However, the changes we made assumed that this threshold number was correct.

As for the remainder of our analysis, you asked us to check on a few other things:

* You asked if your assumptions were reasonable, and whether they are conservative or aggressive.

* In our opinion, the assumptions you made are reasonable. Not assuming an efficiency gain in new natural gas furnaces does make this a conservative estimate. Just to echo Michael's earlier email, efficiency gains from installing new furnaces would lower emissions. However, using a pure BTU analysis certainly helps the accuracy.

* You asked what typical emissions levels should be used.

* We independently researched lbs of emissions per BTU of each fuel source and found that your values were within the range of reasonable estimates. I think the numbers you have used are reasonable.

* I will note though that your total emissions value is listed in Tons. You may consider clarifying short tons (which have 2,000 lbs) or metric tons which is commonly used to describe CO2 emissions and has 2,204.6lbs.

* You asked whether we think the analysis should address H.56.

* We think if you want to account for this legislation it should only be done as a separate analysis, not replacing this one. However, we are not sure how we would do the conversion from ppm to lbs per BTU.

If you have any questions, it might be useful to set up a time for a conference call so Carey and I can both be on. Please let us know if you would like to arrange that.

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Matthew Stern

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