

1. Charge Questions and Scope of the Peer Review

The peer reviewers were asked to review the MOVES 2013 Heavy Duty Vehicle Report. Responses were requested to five general questions and one catch-all question. Similar general questions were asked for each peer review conducted as a part of this work assignment. Two report-specific charge questions were also included. These are repeated below.

1.1. General Charge Questions

The general charge questions were as follows:

1. Does the presentation give a description of selected data sources sufficient to allow the reader to form a general view of the quantity, quality and representativeness of data used in the development of emission rates? Are you able to recommend alternate data sources might better allow the model to estimate national or regional default values?
2. Is the description of analytic methods and procedures clear and detailed enough to allow the reader to develop an adequate understanding of the steps taken and assumptions made by EPA to develop the model inputs? Are examples selected for tables and figures well chosen and designed to assist the reader in understanding approaches and methods?
3. Are the methods and procedures employed technically appropriate and reasonable, with respect to the relevant disciplines, including physics, chemistry, engineering, mathematics and statistics? Are you able to suggest or recommend alternate approaches that might better achieve the goal of developing accurate and representative model inputs? In making recommendations please distinguish between cases involving reasonable disagreement in adoption of methods as opposed to cases where you conclude that current methods involve specific technical errors.
4. In areas where EPA has concluded that applicable data is meager or unavailable, and consequently has made assumptions to frame approaches and arrive at solutions, do you agree that the assumptions made are appropriate and reasonable? If not, and you are so able, please suggest alternative sets of assumptions that might lead to more reasonable or accurate model inputs while allowing a reasonable margin of environmental protection.
5. Are the resulting model inputs appropriate, and to the best of your knowledge and experience, reasonably consistent with physical and chemical processes involved in exhaust emissions formation and control? Are the resulting model inputs empirically consistent with the body of data and literature that has come to your attention?

The catch-all charge question was as follows:

1. Please provide any additional thoughts or review of the material you feel important to note that is not captured by the preceding questions.

1.2. Report-Specific Charge Question Questions

The two charge questions specific to the review of the Heavy Duty Vehicle Report were as follows.

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1. Is the methodology for creating new MOVES2014 running and start exhaust emission rates for compressed natural gas transit buses sufficiently explained? Can you follow the procedure that was used to calculate ratios from the MOVES2010b rates to the MOVES2014 rates and how those ratios were applied? Do you have any suggestions for improving this methodology for CNG emission development or the documentation itself?
2. Does this EPA analysis of CNG buses accurately reflect the changes in control technology and emission standards? If not, how would you recommend to make the CNG emission rates more reflective of bus emission reduction trends over the past two decades?