

MEDIA RELEASE

Advocating the increasing use of NGVs where they benefit most.
For the economy. For the environment. For health. For security. **For America.**

EDF Study Draws Wrong Conclusions about Natural Gas Vehicles, According to NGV America

WASHINGTON, D.C. – April 10, 2012 -- Yesterday, the Environmental Defense Fund (EDF) released a study titled “Greater Focus Needed on Methane Leakage from Natural Gas Infrastructure.” One of the study’s conclusions is that “a shift to compressed natural gas vehicles from gasoline or diesel vehicles leads to greater radiative forcing of the climate for 80 or 280 yr, respectively, before beginning to produce benefits.” Because of significant uncertainty in the data on which the study is based and significant uncertainty in the assumptions about climate relationships in the study’s model, there is no reason to believe that EDF’s conclusion is accurate. As a result, policy makers would be mistaken to withhold their support for natural gas vehicles based on EDF’s conclusions.

Also, it is important to point out that study does state “Compressed natural gas vehicles could produce climate benefits on all time frames if the well-to-wheels CH₄ leakage were capped at a level 45–70% below current estimates.” Because of uncertainty in the data and assumptions, this too could be wrong. Natural gas vehicles may already produce climate benefits in all time frames.

EDF readily admits that the data on which this study is based is highly questionable. The study uses U.S. Environment Protection Agency (EPA) estimates of “well-to-wheel” leak rates, but the study states that these estimates are probably inaccurate. Specifically, the study states:

- “Despite recent changes to EPA’s methodology for estimating CH₄ leakage from natural gas systems, the actual magnitude remains uncertain and estimates could change as methods are refined.”
- “Much work needs to be done to determine actual emissions with certainty ...”
- “Estimates of the net climate implications of fuel-switching strategies should be based on complete fuel cycles (e.g., “well-to-wheels”) and account for changes

in emissions of relevant radiative forcing agents. Unfortunately, such analyses are weakened by the paucity of empirical data addressing CH₄ emissions through the natural gas supply network.”

- “Ensuring a high degree of confidence in the climate benefits of natural gas fuel-switching pathways will require better data than are available today.”

EPA’s estimate of leaked gas has been strongly disputed by the natural gas industry. Between errors in methodology and the fact that much of the gas attributable to leaks is really metering and measurement errors, EPA’s estimate could be off by orders of magnitude. A 2011 report by IHS CERA titled, “Mismeasuring Methane: Estimating greenhouse gas emissions from upstream natural gas development,” documents the some of the flaws underlying EPA’s estimate.

As to the model, EDF has created a new model to determine “technology warming potentials” (TWP) as compared to “global warming potential” (GWP), which has been the recognized standard to date and used by most credible organizations, including the Intergovernmental Panel on Climate Change. EDF contends that their approach is better. But like all such models, this model is filled with assumptions about climate change relationships that may or may not be accurate. In fact, most models turn out not to be accurate. EDF’s news release on the paper states “A number of scientific papers on the climatic implications of natural gas production and use have been published in the last year, inadvertently figuring into a growing sense of confusion due to conflicting conclusions.” The implication is that these other papers got it wrong and EDF has it right. There is a possibility that this is true, but it is highly unlikely. Models are only as accurate as the validity of the assumptions on which they are based, and there is no reason to believe that EDF’s assumptions are valid or reflect reality.

Yet, despite all this huge uncertainty in the data and the assumptions, EDF boldly states: “Presently, compressed natural gas (CNG)-fueled vehicles are not a viable mitigation strategy for climate change.” There is no reason to believe this is true.

NGVAmerica does agree with the view expressed in the study that “There is a need for the natural gas industry and science community to help obtain better emissions data”. As Steven Hamburg, EDF’s chief scientist and co-author of the paper, states in the EDF news release: “... it’s critical that industry, regulators and other stakeholders work together to quantify the existing methane leakage rate.” Gathering this data should be a very high priority.

NGVAmerica also agrees that the natural gas industry should continue to reduce the amount of gas “leaked”. The study states that “maintaining low rates of CH₄ leakage is critical to maximizing the climate benefits of natural gas fuel-technology pathway.”

Methane is a greenhouse gas, and, if the goal is to reduce the amount of greenhouse gases, reducing methane leakage should be also be a goal. But there is also an economic reason to reduce leakage. If EPA's estimates were accurate, the amount of natural gas lost in 2009 was 570 billion cubic feet. At today's prices, that would be over \$1 billion lost to the industry!

“The EDF study is another data point in the debate about climate change,” said Richard Kolodziej, president of NGV America. “But it's only one data point, and, it may just as easily be wrong. Other studies draw opposite conclusions, namely that NGVs reduce greenhouse gases compared to gasoline and diesel. Growing the use of NGVs reduces our dependence on foreign oil and reduces urban air pollution. It may also reduce greenhouse gases. To base transportation policy decisions on this study alone could be a substantial mistake”

NGV America is a national organization dedicated to the development of a growing, sustainable and profitable market for vehicles powered by natural gas or biomethane. NGV America represents more than 120 companies interested in the promotion and use of natural gas and biomethane as transportation fuels, including: engine, vehicle and equipment manufacturers; fleet operators and service providers; natural gas companies; and environmental groups and government organizations. For more information about NGV America, visit our website at www.ngvamerica.org