

March 31, 2016

RE: Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium and Heavy-Duty Engines and Vehicles; Phase 2; Notice on Data Availability

The International Council on Clean Transportation (ICCT) welcomes the opportunity to provide comments on the U.S. Environmental Protection Agency and the National Highway Traffic Safety Administration's *Phase 2 Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium and Heavy-Duty Engines and Vehicles*. The ICCT is an independent nonprofit organization founded to provide unbiased research and technical analysis to governments in major vehicle markets around the world. Our mission is to improve the environmental performance and energy efficiency of road, marine, and air transportation, as well as their fuels, in order to benefit public health and mitigate climate change.

We welcome this chance to comment on the Notice on Data Availability (NODA) associated with the Phase 2 rulemaking. We commend the agencies for their continuing efforts to promote a more efficient and lower carbon economy. In this NODA context, we especially appreciate the agencies' world-class data collection, analysis, and transparent dissemination of their work to underpin their regulatory development.

We would be glad to clarify or elaborate on any points made in the attached comments. If there are any questions, EPA and NHTSA staff can feel free to contact our U.S. program co-Lead, Dr. Nicholas Lutsey ([nic@theicct.org](mailto:nic@theicct.org)).

Best regards,



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## ICCT Comments on U.S. Heavy Duty Vehicle Phase 2 regulation Notice on Data Availability

The International Council on Clean Transportation (ICCT) provides these comments to build upon its earlier public testimony and written public comments in 2015 on the proposed Phase 2 Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium and Heavy-Duty Engines and Vehicles (referred to as Phase 2 standards in the following).

The comments pertain to Notice on Data Availability (NODA) that was issued as part of U.S. Environmental Protection Agency Docket ID: EPA-HQ-OAR-2014-0827 and National Highway Traffic Safety Administration NHTSA Docket ID: NHTSA-2014-0132.

*Data sharing.* We commend the agencies for continuing to conduct rigorous analysis and share detailed data that underpins their regulatory development work. The level of testing, analysis, and data sharing by regulatory agencies within the regulatory process, as exemplified in the NODA, is commendable. For example, the data on the engine maps, model development, powertrain procedures, aerodynamics testing is all very helpful in describing important underlying factors related to the agencies' movement from the proposal and final rule.

*Confirmatory testing.* The U.S. EPA memo on Selective Enforcement Audit and Confirmatory Testing provides a welcome addition to the regulatory development of protocols to monitor compliance with the regulation. Previously, there were limited such details on questions about aerodynamic testing protocols, allowable measurements, thresholds, and margins, so the memo provides helpful guidance and also helps narrow the testing and compliance margins. This opens up a broader set of questions regarding how the agencies will confirm the regulatory compliance data, such as the GEM inputs for various technology-specific drop-down menus, tire low rolling resistance, etc. We would ask that the agencies consider sharing similar details in the Final Rule and/or in guidance memos on how all regulatory input data will be confirmed as valid for vehicles in real-world settings. Confirmatory testing of aerodynamics and GEM inputs, and production vehicle chassis testing, is key to ensuring CO<sub>2</sub> and fuel use reductions over the certification tests correlate with reductions in the real world (Sharpe et al, 2014; ICCT, 2015). In order for the real-world testing program to be successful, it will be critical that the emission results from the testing program are shared publicly and that the testing program starts as soon as possible (i.e., in 2016 ideally) to discern ongoing and future trends from the earliest possible time.

*Protection against defeat devices.* Commenters in the rulemaking and NODA docket have raised a concern about the issue of modifying vehicles emission control equipment. It is important that EPA affirms its long-standing authority and continues to refine the specific regulatory language to prevent the proliferation of defeat devices for vehicles that are driven on public roads. Enforcement cases such as the one with Casper's Electronics' 44,000 defeat devices (see US EPA, 2015) highlight the importance of monitoring and enforcing which companies are developing the devices, and especially ensuring the devices are not being used on public roads. As such, we believe it is important that EPA continue to recognize that there is a legitimate concern about illegal aftermarket devices being used on public roads, and the EPA act to prevent their use (e.g., see US EPA, 2015). Such actions include ensuring that defeat devices are not sold under the guise of competitive race cars while being used on public roads.

*Compliance data sharing.* We would also like to take this opportunity to express how the data sharing about *compliance* of regulated vehicles does not appear to be nearly as detailed or as regular as that of the *regulatory development* data availability as indicated in this NODA. As stated in our previous comments, we recommend that the agencies make all GEM inputs and outputs fully available to the public. Just as actual emission certification results are made public, these GEM data are the certification compliance data and therefore should be made publicly available. Making the full certification database publicly available is critical to let truck fleets who purchase the technologies, fleet consultants who advise on the technology purchases, researchers, and citizen groups transparently see what otherwise only is available to a select few government officials. In addition, we ask that the

agencies include data on the sales (or production volume) by model year of each certified engine and vehicle, as regulatory compliance is based on a sales-weighted average of the results, and sales is a critical compliance determinant and a missing link to see industry and within-segment average CO<sub>2</sub> and efficiency performance.

We especially point out this compliance data question because the EPA began a process to be more forthcoming about the compliance data (US EPA, 2014). The ICCT and other stakeholders provided detailed comments (e.g., see ICCT, 2014). This process has apparently been halted. To date, compliance data for model year 2014 (i.e., “Phase 1”) heavy-duty vehicles’ GEM inputs, CO<sub>2</sub> outputs, and critically the production volume of all the vehicles and engines, has not been made available, when it would be key in allowing stakeholders to understand the ongoing Phase 2 analysis. Similarly, in other compliance areas, full data availability has been lacking. For example, light-duty vehicle CO<sub>2</sub> emissions are based on vehicle model-specific CO<sub>2</sub> emissions, footprint, off-cycle credits, and production volume of vehicles; however, EPA only shares parts of this data without allowing stakeholders to see or understand all the compliance calculations. In addition, to our knowledge EPA has not shared the data to demonstrate heavy-duty diesel in-use compliance (e.g., Portable Emissions Measurement System data) for model year 2010- through 2014-compliant vehicles.

We understand that this NODA is about Phase 2 regulatory development data. Nonetheless, we think data availability on compliance is at least as important as regulatory development data to ensure there is follow-through on the commitments and expectations put forth within each rulemaking. As a result, a full reporting of all model year 2014 vehicle and engine simulation input, testing, and output data needed to determine companies’ compliance standing, within the 2016 heavy-duty vehicle Phase 2 final rulemaking release, would clearly seem warranted. Clear statements in the 2016 Final Rule about the timeline and details for future year (i.e., model year 2015-2027) public compliance data availability would also seem appropriate.

For more particular comments on the powertrain testing, simulation modeling, technology availability, and other factors related to the rulemaking, we would point the agencies to the ICCT’s already submitted comments (ICCT, 2015).

## References

- International Council on Clean Transportation (ICCT, 2014). International Council on Clean Transportation comments on the confidentiality of business information submitted in compliance documents for 2014 and subsequent model year vehicles, engines and equipment; Public docket number OAR-2014-0229. <https://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2014-0229-0015>
- International Council on Clean Transportation (ICCT, 2015). International Council on Clean Transportation comments on United States’ proposed Phase 2 Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium and Heavy-Duty Engines and Vehicles. <https://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2014-0827-1180>
- Sharpe, B., Delgado, O., Muncrief, R. (2014). Comparative assessment of heavy-duty vehicle regulatory design options for U.S. greenhouse gas and efficiency regulation. <http://www.theicct.org/us-phase2-hdv-regulation-design-options>
- U.S. Environmental Protection Agency (US EPA). (2014). Class Determination, Confidentiality of Business Information Submitted in Compliance Documents for 2014 and Subsequent Model Year Vehicles, Engines and Equipment – Notice and Request for Comment. <https://www.regulations.gov/#!docketDetail;D=EPA-HQ-OAR-2014-0229>
- U.S. Environmental Protection Agency (US EPA). (2015). Casper’s Electronics Inc. Clean Air Act. <https://www.epa.gov/enforcement/caspers-electronics-inc-clean-air-act>