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Analysing the vehicle fuel-consumption variability. Implications for the development of a proper labelling scheme for consumer information

Improving the energy efficiency of road transport is a key strategic goal in almost all major world markets.

Nevertheless there is increasing evidence, which suggests that fuel consumption improvements originate rather from test-oriented optimizations and test-related practices and to a lesser extent from the implementation of fuel saving technologies and vehicles' evolution.

Scientific studies show that the offset between officially reported values and real-world vehicle CO2 emissions increases year by year, estimated at about 30% for 2015. In this light, the present study aims at characterizing the uncer-

tainty (variability) in the vehicle fuel consumption to support the design of a proper scheme for labelling the fuel consumption of a vehicle. Two types of data sources will be used, namely the data collected during a period of one year from the same vehicle driven by different drivers, and the data collected from different vehicles tested by a few drivers on a limited number of routes.

Combining the two sets of data in a proper statistical way will allow to merge the wide coverage of testing conditions of the first set with the wide coverage of vehicle technologies of the second set •

