



Evolution of Fuel Consumption in Europe

A recent study has revised the assumptions and the fuel economy values for the baseline scenarios used to predict fuel consumption evolution in Europe. Considering historical developments and observable future trends, the estimated fuel consumption values for the coming decades result higher than those assumed by previous studies.

In relation to climate change, sustainable development, and policy assessment, reducing energy/fuel consumption and carbon dioxide (CO₂) emissions remain the most important challenges faced by the policy makers, along with the automobile and petroleum industry. In this context, it is important to analyse and predict the efficiency of the policies that aim to reduce fuel consumption, thus resulting in CO₂ emissions decrease. The baseline or "business as usual" scenario acts, in these analyses, as the reference against which the other scenarios are compared. Hence, the necessity of considering a baseline scenario that reflects accurately current trends in technical progress, public behaviour, energy markets, and regulatory policies.

A recent study has revised the assumptions and the fuel economy values (amount of fuel used per unit distance expressed as l/100 km) for the baseline scenario used to forecast fuel consumption evolution in Europe. The study considered historical developments of the last three decades and observable future trends in the United States of America and Europe, which have allowed the authors to take into account the factors that have been ignored or neglected in previous studies (e.g. unavailability of new technologies, heavier and more fuel consuming vehicles, or insufficient improvements in fuel consumption).

As a result of the analysis, the authors proposed new fuel economy values to be used in the baseline scenario for energy/transport policies analysis in the European Union Member States for new gasoline and diesel cars for the years 2010, 2020 and 2030. For example, for a new gasoline car in Europe, the current study proposed to assume (on-road conditions) a consumption of 7.5, 6.8, and 6.5 l/100km, for 2010, 2020, and 2030. These values are higher than those assumed by previous studies, which used more optimistic assumptions for the baseline scenario. For example, the WBCSD's¹ Sustainable Mobility Project assumed 5.9, 5.6, and 5.4 l/100km for the same years. Consequently, the authors argued that recent studies carried out in Europe seem to include overly optimistic assumptions with regard to the future fuel consumption of gasoline and diesel cars or the presentation of alternative fuelled cars, thus leading to misleading results.

An interesting finding of the study is that, according to the authors, the European Commission's voluntary agreement with automobile manufacturers may contribute to lower fuel consumption in Europe, although not to the extent predicted by some studies. Therefore, it should not be taken as a major stimulus for vehicle efficiency improvements after 2010.

The current study illustrates how important it is to create and use in policy analysis a realistic baseline scenario that is internally coherent and consistent with the historical trends. Energy/transport policies have to promulgate measures that ensure both real-world fuel consumption gains and minimise rebound effects in order to achieve real improvements in energy consumption.

¹World Business Council for Sustainable Development

Source: Theodoros Zachariadis (2006) "On the baseline evolution of automobile fuel economy in Europe", Energy Policy, In Press

Contact: zach@hol.gr

Theme(s): Sustainable mobility

Opinions expressed in this News Alert do not necessarily reflect those of the European Commission