



50by50 Prospects and Progress Executive Summary



Executive Summary

The purposes of the Report are: Firstly, to assess the prospects for reaching the 50by50 goal (an improvement of 50% in average worldwide new car fuel economy by 2030, leading to a 50% improvement in average worldwide on-road fleet fuel economy by 2050) in the light of on-going research and other developments that have occurred over the past year or so; Secondly, to review the progress that has been made over the last couple of years in reaching this goal.

The Report's main messages:

- By and large, the technologies do exist to deliver 50by50 on the timescale indicated; however,
- The policy framework must be right to enable the market to deliver the fuel economy levels that these technologies permit;
- 50by50 is a reasonable target.



The Report's principal findings and conclusions:

1. Differences in diesel penetration, vehicle performance, weight, and the use of automatic transmissions almost completely explain the differences in class-specific fuel consumption across the OECD countries. Differences in the fuel consumption of vehicles of the same class from one OECD country to another are almost completely explained by differences in diesel penetration, vehicle performance, weight, and the use of automatic transmissions. Differences in technological advances in engine development are a minor factor reflecting the globalisation of car markets. In the largest non-OECD market, China, an estimated 10% reduction in fuel consumption could be achieved in high sales volume vehicle classes by the adoption of more efficient technologies already available in world markets. There also is a significant technology opportunity in the high sales volume segments in India, but this must be tempered by the fact that the opportunities are in very cost sensitive segments. There also is a significant technology opportunity in the high sales volume segments in India, but this must be tempered by the fact that the opportunities are in very cost sensitive segments.
2. Based on recent literature, incremental technologies available to improve fuel economy are estimated to be able to cut average new car fuel consumption by around 50% at least for OECD countries - and possibly worldwide - across the time frame 2005-2030. This suggests that by around 2030 average new car fuel economy in many OECD countries might be close to 4 L/100km (25 km/L, 60 mpg,) or 90gCO₂/km. An indicative target of 25 km/L also seems feasible around 2030 for large car markets in developing countries such as China and India, given the lower average weight of vehicles in these markets.
3. To meet the GFEI 50% target around the world, (and its implication of achieving something close to 4 L/100km on average), it may be necessary in some countries to supplement technology-based improvements with shifts in size mix and performance (i.e. reductions, rather than just holding steady for some OECD countries, and moderated increases in some non-OECD countries). It may also be necessary to introduce plug-in electric drive vehicles, in order to benefit from the efficiency improvements associated with these vehicles.



4. From a policy perspective, the key to achieving this scale of improvement is creating a regulatory and fiscal environment that steers manufacturers to using technological improvements to deliver fuel economy rather than enhanced performance and heavier vehicles, and that steers consumer demand towards more energy-efficient vehicles.
5. In order for manufacturers to make the necessary investments in engine and auto plants the regulatory framework needs to create certainty. Risks are minimized when binding targets are set well in advance. This underlines the importance of early conversion of the EU's 95gCO₂/km target into an agreed emissions standard, and for other countries to adopt standards that apply 10 or more years in the future.
6. It is important for those countries that have not done so, especially those that will experience major growth in their vehicle fleets in the coming years, to start developing national fuel economy initiatives now. This will ensure that the necessary fiscal and regulatory environments are in place to achieve significantly improved fuel economy. The GFEI has begun a process to help regions and countries move forward in this regard. Examples of this work are the UNEP/GFEI web-based "Auto Fuel Efficiency and Climate Change: A Tool for National Strategy Development" <http://www.unep.org/transport/gfei/autotool/> and CAI-Asia's "Improving Vehicle Fuel Economy in the ASEAN region."
7. The GFEI should also work toward raising awareness and capacity of lawmakers, stakeholders, and the general public on the issue of fuel economy. This can be done by supporting labeling programs, public information campaigns, and continued use of workshops and conferences to share information and by recent research.



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