

Quality of petrol and diesel fuels

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The Commission reports on fuel quality in Member States pursuant to Article 8 of Directive 98/70/EC which sets minimum specifications on health and environmental grounds for fuels to be used for vehicles equipped with positive-ignition and compression-ignition engines. Fuel quality is environmentally important because it affects engine pollutant emissions and thus air quality as well as the ease and cost with which desired pollutant and greenhouse gas emission limits can be achieved by manufacturers.

Directive 2003/17/EC, amending Directive 98/70/EC, requires a further reduction of the sulphur content of petrol and diesel fuels. Non-respect of the fuel specification can lead to increased emissions and might damage engine and exhaust after-treatment systems, leading to higher air pollutant emissions. This 5th Commission Report summarises Member States' submissions on the quality of petrol and diesel, as well as the volumes sold, for the year 2006. All Member States except Malta submitted national reports for 2006.

The monitoring of fuel quality in 2006 shows that the specifications for petrol and diesel laid down in Directive 98/70/EC are in general met and again few exceedances were identified.

For **petrol** the main parameters where exceedances were identified were research/motor octane number (RON/MON), summer vapour pressure and distillation/evaporation at 100/150°C. For **diesel** the main parameters where exceedances were identified were sulphur content, distillation 95% point, cetane number and density.

Although several Member States reported non-compliant samples, in general fewer samples exceeded the limit values (and the limits of tolerance for the test methods) compared to previous years. Several of the new EU10 Member States previously reported significant numbers of samples non-compliant with limit values, but the number of non-compliant samples they reported has reduced significantly in 2006. Belgium reported a higher proportion

(~3.5%) of non-compliant samples than other Member States in 2005 (though improved on previous years). However insufficient detail has been provided in 2006 to gauge actual non-compliance numbers. Sulphur content for diesel was a particular problem in previous years (mainly for EU-10), due to the new mandatory <50 ppm level from the start of 2005. However, this problem appears to have been resolved in 2006.

The Commission is not aware of any negative repercussions on vehicle emissions or engine functioning related to these exceedances, but continues to urge Member States to take action in order to ensure full compliance. The Commission will continue monitoring compliance with the fuel quality requirements laid down in the Directive.

The share of <10 and <50 ppm fuels have been increasing from 2001 to 2005. For 2006 the

proportions have increased significantly, with the <50 ppm sulphur limit becoming mandatory, and the requirement for introduction of <10 ppm sulphur fuels across the EU.

Zero sulphur fuels were available in the majority of Member States in 2006 (UK, Malta and Cyprus still need to introduce these fuels). However, from current indications there are still cases where the grades do not appear to be labelled in certain Member States.

This lack of labelling could hamper the introduction of vehicles using technology requiring sulphur-free fuels before full mandatory introduction in 2009 since without labelling consumers have no possibility to choose these fuels. This is particularly important for owners of vehicles utilising technology that requires sulphur-free fuel and significantly undermines the value of having fuels meeting this criterion available. As a result the full potential offered for reductions in CO₂ from the road transport sector would not be realised. Belgium, Czech Republic, Ireland, Latvia, Luxemburg, Slovakia and Slovenia are countries where action could be taken to ensure zero sulphur fuels are labelled in future years. Reporting on this labelling could help the automotive industry gain confidence in fuel availability so that vehicles taking full advantage of the zero sulphur content are more widely introduced leading to an environmental gain through lower pollutant and greenhouse gas emissions. In general very limited information has been provided by Member States on the geographical availability of zero sulphur fuels. Most Member States simply stating they were widely available, but provided no supplementary information to provide a measure of the geographical availability.

The fuel quality monitoring systems established at national level differ considerably and require further harmonisation in order to provide transparent and comparable results. The implementation of Directive 2003/17/EC has led to improved quality of reporting as it requires Member States to report on monitoring in accordance to the new European Standard, EN 14274, or with systems of equivalent confidence.