



RENAULT

PRESS RELEASE

MARCH 6, 2007

Renault presents a range of affordable, environmentally sensitive vehicles

As part of its 'Commitment 2009' programme, Renault is pursuing an ambitious environmental plan to reduce greenhouse gas emissions. This is based on three axes: to be one of the world's top three carmakers for low-level CO₂ emissions, to offer a range of models powered by biofuels and to develop a wide range of alternative technologies. The first steps in this operation became a reality late in 2006, when Trafic and Master went on sale with engines capable of running on B30 biodiesel. In spring 2007, Renault will introduce a Mégane that runs on E85 bioethanol. The company will be one of only a few manufacturers offering vehicles that run on two biofuels (bioethanol and biodiesel).

Thanks to its ongoing work with diesel, petrol and biofuel engines, Renault is producing environmentally sensitive, affordable vehicles.

Under the terms of Renault Commitment 2009, Renault is firmly committed to cutting its vehicles' CO₂ emissions in order to help reduce the greenhouse effect. To this end Renault has set itself three major targets:

- Become one of the world's top three car manufacturers in terms of CO₂ efficiency. By 2008, through its '120/140' plan, Renault aims to be selling one million vehicles that emit less than 140g of CO₂ per kilometre, with one third of those emitting less than 120g.

- Offer a range of vehicles running on biofuels. By 2009, 50 per cent of Renault petrol-engined vehicles marketed in Europe will be able to operate on blends of petrol and ethanol. Furthermore, all the brand's diesel-engined vehicles will, within the same timeframe, be able to run on fuel that is 30 per cent biodiesel.

- Develop a wide range of alternative technologies. Within the framework of the Renault-Nissan Alliance, Renault is preparing a broad selection of alternative technologies such as hybrid and

electric vehicles and fuel cells. Within the framework of Renault Commitment 2009, Renault will conduct a series of tests in France with vehicles powered by fuel cells based on advanced Alliance technologies.

Renault on the fuel economy/low CO₂ emissions podium

Renault's engine efficiency has already made it one of the world's top three manufacturers in terms of low CO₂ output – a result that underlines the progress the company has made during a fuel economy drive stretching back almost 20 years. In 1993, for instance, a full tank would be enough to take a 93hp Renault 19 1.9DT the 786km between Geneva and Brussels with an average fuel consumption of 6.5 litres/100km (and CO₂ emissions of 172g/km). By 2000, a Mégane 1.9 dTi 100hp Mégane could carry its occupants the 984km from Geneva to Amsterdam at 5.2 litres/100km (with CO₂ emissions of 138 g/km). Today, a Mégane 1.5 dCi 105hp will cover the 1,114km from Geneva to Berlin with fuel consumption of just 4.5 litres/100km and CO₂ emissions of 120g/km.

Its latest petrol engine, the TCE 100hp, is a perfect example of the vast expertise the company has accumulated. Delivering the 100hp output of a 1.4-litre engine and the 145Nm of torque associated with a 1.6-litre engine, this 1.2-litre powerplant, fitted to New Twingo, will record a combined cycle fuel consumption of 5.9 litres/100km (emissions 140g/km). Renault displays the same degree of expertise when it comes to diesels. Powered by the 1.5 dCi 105hp engine equipped with a particulate filter, Mégane emits just 120g of CO₂ per kilometre. In 2005 this made it the best car in its class in terms of CO₂ emissions. In a Laguna, the 2.0 dCi 175hp engine with particulate filter is acknowledged for its remarkable balance between performance and fuel efficiency, which produces combined cycle fuel consumption of 6.0 litres/100km. For Renault, the optimisation of conventional petrol and diesel engines remains one of the most cost-effective ways of controlling greenhouse gas emissions. In 2005, almost one in every five Renaults sold in Europe emitted less than 120g/km of CO₂.

Bioethanol and biodiesel: two biofuel options in Europe

When an E85 bioethanol-compatible Mégane reaches the showrooms in spring 2007, to complement Renault's existing B30 biodiesel commercial vehicles, the company will be one of only a few to offer European customers two biofuel options.

Since late 2006, Trafic has been available with the 90bhp and 115bhp 2.0 dCi B30 engines and Master with the 100hp and 120hp 2.5 dCi B30. Aimed principally at companies with large fleets, these vehicles can run with equal ease on diesel fuel or mixtures of conventional diesel and B30 biodiesel. Engines of this type will be available in Renault's cars from 2008. For instance New Twingo, launched here in Geneva, will be sold with the B30-compatible 65hp 1.5 dCi engine.

This spring, Renault is introducing a Mégane powered by a 110hp 1.6 16V engine. It will run on E85 bioethanol and will be Renault's first bioethanol vehicle in Europe. Derived from existing powerplants in the range, the engines have been modified to adjust automatically to different

fuels. The main changes affect the tank, fuel injection system and combustion chamber. Since 2004, Renault has been selling E100-compatible flex-fuel Clio and Mégane models in Brazil.

Renault considers biofuels to be one of the most efficient and economical solutions for curbing CO₂ emissions in the medium term. Produced from vegetable matter, they are a renewable, diversified energy source that will help limit dependence on fossil fuels. An additional advantage is that biofuel can be made from locally available resources, which cuts CO₂ output by minimising the need for transport.

Since March 2006 Renault has been working with DaimlerChrysler, Volkswagen, Royal Dutch Shell and Sasol Chevron, as part of the Alliance for Synthetic Fuels in Europe (ASFE), to research second-generation biofuels. These are obtained using a method known as the Fischer-Tropsch process, using either natural gas (gas to liquid), coal (coal to liquid) or biomass (biomass to liquid) as a base starting point.

What kinds of biofuel does Renault use for these vehicles?

Bioethanol is made by fermenting and distilling plant or vegetable matter, such as wheat or beetroot in Europe, sugar cane in Brazil or corn in the USA. Bioethanol can then be mixed with petrol in varying proportions: 5 per cent content is E5, 10 per cent is E10 and 85 per cent is E85. Flex-fuel vehicles like the Brazilian market Clio 1.6 16V Hi-Flex can burn neat bioethanol.

Biodiesel is an alkyl ester derived from vegetable oil. It is produced from oleaginous crops and plants (mainly rapeseed and sunflower in Europe, but also soya and palm oil in other parts of the world). Through a process known as transesterification, vegetable oil reacts with methanol to produce biodiesel which can then be mixed with straight diesel. When mixed with diesel at a rate of 30 per cent, biodiesel is called B30.

From well to wheel

To understand the advantages of biofuels over fossil fuels in reducing CO₂ emissions, it is important to take a holistic, or well-to-wheel, approach. Well-to-wheel analysis serves to rate the efficiency of a fuel by calculating its aggregate CO₂ emissions from when it is produced to when it is burnt in a vehicle.

Fossil fuels are responsible for CO₂ emissions during production (drilling and refinery), when they are shipped and when a vehicle burns them. Biofuels originate from plants, which are grown to produce them, and the CO₂ absorbed by the plants as they grow (photosynthesis) is subtracted from the biofuel's total CO₂ emissions. What's more, because biofuels can be made from locally available biological matter, there is much less need to transport them to distribution facilities by road or sea, which in turn limits CO₂ emissions.

Total CO₂ emissions produced by the biofuel chain are much lower than for conventional fossil fuels. Some biofuels can, depending on the plant material used to produce them, lead to

reductions in CO₂ emissions of up 70% compared to a petrol engine. The reduction can reach about 20% in the case of a biodiesel or diesel engine.

High-resolution images pertaining to environmental issues can be downloaded from www.media.renault.com > Media library > Environment

Press contact:

Renault Press: +33.1.76.84.63.36

Web sites: www.renault.com – www.media.renault.com