



## Press Release: For Immediate Release

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**In view of the plans of the European Commission, Melexis can state that the company is ready to accomplish the needs the Commission has pointed out in its draft regulation last month. The company's Integrated Circuits and Sensors are essential elements in the automotive industry's accelerated roadmap for CO2 footprint reductions and fuel efficiency gains.**

The current high energy prices are structural and driven in part by the successful economic achievements of China and India. To offset these new consumption and emissions sources the Kyoto Agreement signatories are all pledged to meet new efficiency targets. These commitments are driving fuel efficiency and reduced emissions as the top priority design targets of the world's automotive OEM's. The strong shift in buying patterns has confirmed that consumers want the most fuel efficient vehicles that meet their personal and professional needs. The same consumers also acknowledge their responsibility to the planet and look to honor their obligation in their choice of cars.

A few of these exciting technologies designed with Melexis ICs to reduce emissions or improve fuel efficiency are listed.

Rolling friction of tires is a source of energy waste that can be reduced by optimal tire pressure. Tire pressure monitoring systems (TPMS), already obligatory in the US, will warn the driver when the tire is significantly below its optimal pressure. The European Commission considers making such systems obligatory in Europe too with the goal to save 2.5% of fuel. Melexis is delivering ICs for such systems.

Stop-Go systems, sometimes also referred to as mild Hybrids, start to see increased application in new developments by the car industry. Stop-Go systems switch off the engine when the vehicle is stationary, like at traffic lights. Brake energy regeneration harnesses energy lost during braking. These systems can save 8 to 15% in city driving. Melexis is delivering position sensors, current sensors and BLDC motor drivers for such systems.

The Melexis Triaxis technology is used for clutch position and transmission position sensors. Multiple high speed current sensors are used in hybrid drive train to control the flow of electric energy.

A good application for our brushless (BLDC) motor drivers is in the electric water pump: the electronics make sure the pump is working with maximum efficiency. The IC receives information on the behavior of the motor and drives the pump at the right pace. This results in an energy reduction close to 1%.

Other pumps in a car are also controlled by electronic BLDC motors. One of the most recent and common application is in fuel pumps. Due to additives that turn gasoline and diesel into more efficient fuels, the liquids tend to be more aggressive and make the brushes of the pump motors





wear out faster resulting even in warranty issues. Using brushless (BLDC) motors enable the pumps to last longer. Melexis produces specialized ICs for BLDC fuel pump motors.

CO2 emissions can also be prevented by enhancing the combustion of the fuels. Therefore car manufacturers plan to use in-cylinder pressure sensors to monitor and adjust the injection of diesel fuel for next generation clean engines to meet Euronorm 6. Melexis delivers the ICs for these essential in-cylinder pressure sensors.

Diesel cars will contain a Diesel Particle Filter (DPF). The Melexis pressure sensor monitors the filter and will indicate if it needs to be regenerated.

Electric Power Steering (EPS) can save 8% fuel compared to classical hydraulic power assist systems. The EPS systems use non-contacting magnetic or optical sensors to measure, contactless, the amount of torque demanded by the driver depending on the driving situation. Beside the sensor, Melexis also makes the ICs for the drive electronics to control the brushless electric motor that delivers the drive assist.

Reducing weight of the car will equally reduce the CO2 emissions. By replacing power cables by smart networks, weight of the wiring harness can be reduced. Melexis is selling LIN (Local Interconnect Network) ICs to simplify the cabling harness of the car.

In general Melexis continuously develops new products to enhance the energy consumption in vehicles. Melexis has delivered 25mio Euro worth in ICs in 2007 for the above mentioned systems. Most of these systems are in an early stage of adoption and will gradually be deployed in Europe and worldwide towards 2012.

Beside the CO2 reduction, the automotive industry and EU-regulations are also concerned with active and passive safety such as Electronic Stability Control (ESC), Lane Departure Warning (LDW), Advanced Emergency Braking (AEBS), Brake Assist Systems (BAS) and Day time running lamps based on LED technology (DRL). Melexis is also delivering Integrated circuits for all these safety systems.

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### About Melexis

Melexis Microelectronic Integrated Systems N.V. (Euronext Brussels: MELE) is a mixed signal semiconductor manufacturer. Melexis designs, develops, tests and markets advanced integrated semiconductor devices for the automotive industry. Our core experience supplying ICs for automotive electronics sustains the expansion into Application Specific Standard Products for industrial and consumer product applications. Melexis enthusiastically pursues its role as a component supplier whose innovations, while physically small, are the essential element in nearly every one of our customers' extraordinary systems.

At Melexis we believe that "Small things make a big difference". Melexis' products include sensor, communication, actuator ICs and Application Specific Integrated Circuits (ASICs).

Further information about Melexis can be found at <http://www.melexis.com>.

