



Energy solutions

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Significant progress is being made in the field of energy solutions – not least in the automotive industry - in order to meet the challenges facing the world in the 21st century.

My position at Hyundai Motor Europe enables me to comment on the situation from the perspective of a car manufacturer, though I should make it clear that I am not here as an appointed representative of the automotive sector.

Central to the world's mobility needs, the car industry has to innovate in order to survive, applying new energy solutions, while also being an energy consumer and a major source of CO₂ emissions. It has been calculated that as much as 27 per cent of all CO₂ emissions in the EU come from our industry.

As a result, the introduction of new energy solutions and progress in reducing vehicle fuel consumption and emissions could make a real difference to the pace of climate change.

There is already some 'encouragement' from governments and cross-border organizations in the drive towards new technologies and lower vehicle emissions. In the EU, auto-makers have been tasked with achieving average emissions of 130 grams per kilometre of CO₂ at the tailpipe by 2015, with an even tougher target of 105 grams per kilometre by 2020. Non-compliance will bring heavy financial penalties, possibly running into millions of Euros.

17 European markets offer incentives for products which fulfill particular criteria. In these cases, car buyers can benefit from reduced rates of taxation if they choose lower-emission vehicles or vehicles with latest-generation 'clean' technologies.

This has accelerated the trend of down-sizing, where consumers are opting for smaller, more fuel-efficient cars. The resulting surge in demand has seen Hyundai's European small car sales grow by over 70 per cent in the first five months of 2009.

However, the industry suffers due to inconsistency when it comes to incentives offered to car owners. And country-specific emissions targets vary widely.

A global player like Hyundai must take account of the EU-wide targets, but also regulation in the Korean market, US laws – even state-specific emissions rules in California, for example - as well as many other sets of guidelines and legislation from around the world.

In Europe alone, we must develop products to suit a very wide range of different vehicle-related tax laws. This is a daunting challenge, and meeting it requires a considerable investment in terms of product development and marketing.

When handling multi-billion euro product development programs, it becomes increasingly challenging to take account of different taxation and emissions policies. In the EU in particular, where we have a common emissions policy implemented inconsistently via fiscal policy, we run the risk of moving away from a common market for cars and incurring costs that may ultimately have to be borne by the consumer.

Hyundai already invests five to ten per cent of total revenue in R&D, a significant proportion of it in initiatives to drive down tailpipe emissions.

Some of the energy solutions from car manufacturers are based upon more efficient gasoline and diesel engines. By minimizing vehicle weight and making subtle changes to vehicle aerodynamics, car-makers have been able to secure extra efficiency from current generation technology. Furthermore, combining a traditional-fuel engine with a small electric power unit has brought about the arrival and widespread acceptance of the so-called 'hybrid' car.

Much faith is also being placed in the potential uptake of bio fuels, particularly in North America. However, the "food versus fuel" debate continues, and access to second-generation biofuels as well as overcoming ethanol tariffs are perhaps a gateway to more widespread bio fuel use.

Some car companies have previewed electric cars. These vehicles can be recharged through the domestic grid, but their modest range and top speed have - so far - limited their appeal.

Unless there is a revolutionary step forward in battery technology, we at Hyundai do not see electric cars as being a solution for long-haul transportation needs: here in Europe diesels vehicles are, and will remain, the most efficient in this regard.

However, we do believe that electric cars are viable as city cars, but only if government and utility companies do their part to create the necessary supporting infrastructure. This means putting in place roadside recharging points, but also overhauling regulation, such as creating electric-only parking facilities, and reducing tolls and taxes for pure electric vehicles. All of this will be vital to help spur sales and to reduce emissions.

Hydrogen fuel cell vehicles could be a viable, long-term solution for the world's motorists, but here too there are challenges. Most notably, these cars will require a network of sophisticated re-fuelling stations spread over a wide geographical area if they are to become a commercial success.

At Hyundai, we have an environmental strategy which is at the heart of our Corporate Social Responsibility program. And sound ethical policy is fully integrated into our

production operations and new product development process. Our so called Blue Drive initiative, meanwhile, will see us introduce a range of next-generation, highly efficient models from this year.

So to close: car manufacturers, not least Hyundai, are committed to tackling environmental issues. However, the considerable challenges of developing and delivering new energy solutions to reduce emissions - and doing so profitably - will help shake up the established global order of car manufacturing, providing opportunities for brands such as Hyundai.

Thank you.