

Road to Copenhagen

Carmakers race to secure electric lead

News analysis

In the second of five articles on climate change and mitigation, John Reed looks at the automotive industry

Snub-nosed and squat, with a no-frills, cramped cabin, the little Peugeot Ion is unlikely to win any design awards. But if current industry trends continue, it may one day be remembered as a trailblazer of zero-emission cars.

Road transport currently accounts for about 10 per cent of global greenhouse-gas emissions, compared with about 3 per cent each for shipping and aviation. In Europe, the figure is 15 per cent.

Governments around the world are seeking to tackle the problem by introducing increasingly stringent regulations covering vehicle emissions.

In response, and also in reaction to volatile oil prices and advances in car batteries, the big players in the automotive industry are embracing electrification.

"The regulatory environment in the US, Europe, Japan and possibly China will be such that it will be almost impossible for automakers to ignore electrification in their vehicles," said Rod Lache, managing director with Deutsche Bank Securities in New York.

Yet with millions of first-time car buyers entering the market in China, India and elsewhere, environmental advocates say carmakers' greenhouse-gas emission cuts will need to be even more aggressive, just to keep up with the growing number of vehicles.

"If the car sector is to keep pace, you are looking at annual emissions reductions of 5 per cent," said Jos Dings, director of Transport & Environment, a Brussels-based pressure group.

In 2008, according to the group, carmakers cut their fleets' average carbon dioxide emissions in Europe by 3.3 per cent.

In London last week, PSA Peugeot Citroen demonstrated for the first time Peugeot's plug-in Ion and its sister brand's Citroen C-Zero. The cars can drive 130km on a single electric charge.

At the launch, the French carmaker vowed to become the first automaker to market with a full range of electric vehicles in Europe next year.

If so, it will beat its arch-rival Renault, whose chief executive, Carlos Ghosn, is staking his reputation on the success of four planned electric models launching in 2011-12. General Motors and BMW intend to demonstrate their latest electric models this month.

But automakers and government regulators are also grappling with unattractive economics. Early electric models will be expensive because of their small sales volumes and high battery costs. Car buyers - however green-minded they profess to be - have historically been unwilling to pay a premium for a cleaner car.

"It's a vicious circle," said Guillaume Faury, Peugeot's head of manufacturing and components. "If we don't have the volume, we don't have the low cost; if we don't have the low cost, we don't have the volume."

The company is not discussing the price of its two forthcoming electric cars, except to say that they will have similar lifetime running costs to conventional ones. It is studying a plan to charge customers a low up-front price supplemented by monthly payments.

Tellingly, its sales projections are modest: Peugeot thinks it will sell 25,000 units a year of the two models by 2015.

The carmaker, like others, thinks more people will buy two planned forth-

coming hybrids it is launching in 2011-12 which, like others, will have a combustion engine on board and so have a longer driving range.

Peugeot was a pioneer in producing earlier-generation electric cars, about 10,000 of which it sold between 1995 and 2005.

About half are still on the road, but the vehicles failed to achieve wider popularity because of performance drawbacks linked to their limited batteries and a dearth of places to recharge them.

New lithium-ion batteries, which will deliver longer driving ranges, are the second key factor powering the new generation of plug-in hybrid and electric cars.

To encourage more people to buy such vehicles, the UK will offer tax breaks of up to £5,000 (\$8,200, €5,470) from 2011. The US plans a tax credit of \$7,500 (€5,000, £4,570) for electric cars and

France already offers a similar-sized tax rebate for ultra-low emission cars.

Most industry players are also pursuing a wide

range of less eye-catching technologies to cut emissions, from smaller engines to improved aerodynamics, use of lighter materials, and "stop-start" systems that switch engines off when cars are stopped in traffic.

Industry analysts give warning, however, that customers might abandon rechargeable cars when the hefty tax incentives for them expire, as many US drivers did when early incentives for hybrids such as the Toyota Prius ran out.

"If we want this technology to be successful, we need incentives in place at the very beginning," said Mr Faury.

His company, Peugeot, says falling battery costs will help carmakers cope as tax breaks are phased out.

