

Test sites for electric cars



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If there is to be a fully sustainable transport system with virtually no CO₂ emission by 2050, then it is necessary to start realising the ingredients in practice now. The electric car is one such ingredient. But we must not hype up this development too soon because the first hurdle may bring it down.



A journalist recently described Dr Richard Smokers as a ‘concerned father’ when interviewing him about the future of the electric car. Smokers is indeed concerned because this is the fourth *hype* he has witnessed during his career in the field of sustainable mobility. At the start of the nineties he rode the last peak wave that the electric car surfed. Then it was the turn of the hydrogen car, followed by biofuels and now again the electric car. ‘Since I returned to TNO, I have been trying to tone down the hype a bit and put it all in a longer term perspective. I’ve already seen the subject perish a couple of times because excessive expectations could not be met. If an unexpected incident occurs, then the electric car will be dropped like a hot coal and not be heard of again for the next decade. Hypes are simply counterproductive.’

REALISTIC EXPERIMENTS

By 2050 our car fleet must be four to five times more sustainable than it is today. Smokers thinks that forty years is deceptively far away: ‘We have to start now getting real-life experience and creating market demand. In twenty years the technology that will enable a sustainable car fleet will have to be ready for mass production. Not something that can be achieved overnight. It took around twelve years for the hybrid Toyota Prius to gain a little popularity. Government incentives have been key. Electric and hydrogen cars require a new energy infrastructure and are therefore even more difficult to sell.’

There is still plenty of research and improvement required for the electric car – the range has to be significantly extended, the cost reduced and an infrastructure established for charging the cars. Demonstration projects and field tests can generate a lot of knowledge. Smokers: ‘It would be great to have three major test sites around Amsterdam, Rotterdam and Den Bosch, for example. It would make your experiments more realistic than many small sites spread throughout the country.’

By actually getting started we will encounter all the problems that need solving. Like driving an electric car from Amsterdam to Rotterdam and wanting to charge it car there – will your plug fit the socket and how do you pay? Smokers: ‘Energy companies and others involved are working on the standardisation of the hardware

as well as on the realisation of roaming systems allowing mutual payments as in mobile telephony: you subscribe to T-Mobile, for example, but phone via the KPN or Vodafone network. TNO can help in such developments; we are already involved in proposals for real-life test sites and advise the Ministry of Transport, Public Works and Water Management that coordinates the programme. TNO is also helping to harness the European EVA project, in which all kinds of European test sites will be exchanging information. Déjà vu? I guess so. I was doing the same thing fifteen years ago.’

ADDED VALUE

Smokers is keen to make other comparisons with the development of the mobile phone. ‘Fifteen years ago we had no idea why we needed such a thing but once we realised the new possibilities it offered, society generated plenty of investment money for it. For sustainable mobility it’s a bit more complex. In first instance, an electric car does nothing different from a conventional car: it gets you from A to B. But if we can link new possibilities and added value to sustainable mobility, the transition to a sustainable transport system will become much easier.’

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