

The first of a second generation of hybrid buses

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Ms Louise Aangeenbrug is a spatial planning advisor for Enschede City Council in the Netherlands. She is currently working to introduce hybrid diesel buses to Enschede in January 2010.

The 'innovative sustainable bus' project started in 2004, when the City Council decided to build a special bus lane through the Roombeek area of Enschede, the Netherlands. Ms Louise Aangeenbrug became involved in 2005, charged with investigating all the alternatives on the market at the time: comparing natural gas, hydrogen, diesel and hybrid technologies.

Proposal

"We decided hybrids were the best solution, because they are quiet, clean and comfortable, they use less diesel and save energy," explains Louise. "Once we'd made the decision, we worked with Rayner Mayer from the Low Carbon Vehicle Partnership (LowCVP) in the UK to submit a proposal to an EC subsidy programme called KP7."

KP7 is a European Commission project, based in Brussels, which aims to stimulate sustainability in transport across Europe. Enschede Council joined forces with a number of other European parties to apply for funding for the hybrid bus project from KP7. Unfortunately, the attempt was unsuccessful. However, undeterred, the group continued to investigate other funding avenues.

[F019 image 1](#)

Rectify

"Eventually we found another funding opportunity: the Dutch government said it would support us as part of its Innovative Public Transport scheme. This is a policy to stimulate the eco-bus agenda in the Netherlands. There's a lot of innovation behind the scenes in the sector, but it never reaches the market because it's too expensive. The government scheme aims to rectify this," says Louise.

The project finally received funding one month ago. The good news, Louise says, is that many partners from the previous attempt are still involved, including electric drive line manufacturer Vossloh Kiepe from Germany; Dutch busbuilder VDL; Connexxion, the local public transport operator; the University of Twente, DHV; Region Twente and the City of Enschede.

The partners will now begin to work on creating the bus which, if all goes to plan, will use fifty per cent less fuel and create seventy per cent less emissions than regular diesel buses.

F019 image 2Nerve-wracking

“It’s a very collaborative project,” Louise continues. “We are getting the bus’s fly-wheel from our English subcontractors, the Germans will attach the wheel to their electric drive line, and the Dutch builder will build both elements into a bus chassis. It’s a nerve-wracking process because the different technologies we are using have never been used together before.”

First of a second generation

The project could have wider-reaching implications for sustainable public transport in the Netherlands. While there are several government-funded projects investigating areas like biofuels and hydrogen technologies, and a couple tackling hybrids, none take the same approach as the 'innovative bus project'. Louise is hopeful that, if successful, it could serve as a prototype for similar hybrid public transport initiatives in the Netherlands.

“I believe our project could be seen all over the country, that’s why we’re investing such a lot of money,” she explains. “We think our bus will be the first of a second generation of hybrids. The funding we have already secured will support us for three and a half years: one and a half years to prepare and build, and two years of driving and testing on the road. Hopefully, after this our bus concept will be so successful that the involved industries will be able to launch our hybrid bus commercially,” she says.