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City:

Ghent

Region:

Western Europe

Country:

Belgium

Topic:

Clean and energy-efficient vehicles

In brief

Within the framework of the CIVITAS ELAN project , the municipality of Ghent set up an ambitious programme to lessen the environmental impact of its vehicle fleet in order to eventually become CO2-neutral by 2050. In addition to the promotion of the use of electric bicycles and the introduction

of an electric Cambio car-sharing system, the Belgian city purchased 14 electric vehicles in 2012. The project has provided an important stimulus and, as of 2015, 32 electric vehicles have been purchased, and that number continues to grow.

Context

The original idea by the municipality of Ghent was to integrate biodiesel models into its fleet. However, because of legal and technical warranty barriers, Ghent was not allowed to implement this plan. The fleet management group, which was set up to pilot the [integration](#) of biodiesel into the municipality's fleet, chose instead electric technology as a way of starting to reduce emissions from the city's vehicle fleet.

In action

Ghent issued a public tender in 2012 made up of a framework contract for the acquisition of five different types of electric vehicles in five lots. The framework contract allows the city to buy electric vehicles over a period of 4 years. Technical specifications about the batteries stipulate that they must be able to fully charge within 12 hours or partially charge within an hour. The battery must be guaranteed for 4 years and provide the vehicles with a range of at least 120 km. Bidders are also asked to provide vehicles with electric motor of at least 40 kW. Finally they are also requested to offer the very latest models available on the market.

The decision was taken to specify two award criteria: the costs (60 per cent) and the quality of the vehicles (40 per cent). The costs criteria includes the purchase price, but also maintenance and repair costs, other actual expenses and takes into account the price of a spare battery and depreciation value of the vehicles after 8 years. Drivers training and maintenance are both included in the contract. Ghent estimates that the purchase cost of the electric vehicles is approximately three times more expensive than the price of diesel-equivalent vehicles.

Results

Ghent's electric vehicles have enabled the municipality to cut its emissions as they are zero-emission. In addition, as the electricity used by Ghent comes entirely from renewable sources, electric vehicles are 100 per cent 'clean' and do not emit any CO₂, NO_x and PM. In opening the contract to other public authorities in the region, Ghent has allowed the positive environmental impact of the technology to spread.

Challenges, opportunities and transferability

Despite the higher prices, and some minor technical problems such as the vehicles malfunctioning during low temperatures, the electric technology is considered beneficial for Ghent. As of August 2015, the municipality has already bought 32 electric vehicles and has more orders pending.

In Depth

- [City of Ghent website](#)
- [CIVITAS ELAN case study](#)
- [Clean Fleets case study](#)

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