

Project Overview

The ZEFER project started in September 2017 and will run until September 2022. The project will deploy 180 FCEVs (Fuel Cell Electric Vehicles) in Paris, London, and Copenhagen. It will demonstrate the viable business cases for captive fleets of FCEVs in operations which can realise value from hydrogen vehicles. ZEFER aims to drive sales of FCEVs to other cities, thereby increasing FCEV sales and improving the business case for HRS (Hydrogen Refuelling Stations) serving these captive fleets.

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Download the brochure here

Project Objectives

Prove the viable business models for operating FCEVs in high mileage fleet applications

- Gather evidence on the performance of FCEVs as high mileage fleet vehicles
- Demonstrate viable business models for early HRS supported captive fleets
- Deploy and test the performance of 180 fuel cell passenger cars in high-mileage fleet operations
- Test the performance of today's best-in-class hydrogen refuelling station technology under significant increased loading compared to current levels
- Ensure widespread dissemination of the technical and business modelling research results to target groups of decision-makers



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Zero Emission Fleet Vehicles For European Roll-out

ZEFER will demonstrate the viable business cases for captive fleets of FCEVs in operations which can realise value from hydrogen vehicles.



Hydrogen fuel cell electric vehicles are a clean, green alternative to petrol or diesel engines. The ZEFER project aims to give you confidence in the technology and prove the benefits it has on the environment and society.

How far can you travel on a full tank ?

The hydrogen vehicles, deployed as part the ZEFER project, average around 100km per kilogram of hydrogen, equating to a vehicle range of 500km per refuel of their five-kilogram tanks. The vehicles deployed refuel on average every 200 km.

How long does it take to refuel ?

Filling up on hydrogen at a refuelling station can take a matter of minutes, dispensing at a rate of 1.1 kg/m, comparable to conventional petrol or diesel pumps. Vehicles in Paris and London top up an average of 2.2 kg of hydrogen per refuel.

Are hydrogen vehicles safe ?

Since the project started, there have been no safety problems at the refuelling stations or with the fuel cell system. Even those vehicles that have been involved collisions experienced no safety problems with the fuel cell system.

How many refuelling stations are there ?

There are 159 refuelling stations across Europe, including 6 HRS in London and Paris with additional HRS in preparation. As the ZEFER project proves hydrogen vehicles as an alternative option, more will be installed to develop strategic infrastructure. At least 45 more are expected to be built by the end of 2022.

- **2017**
ZEFER project commences
- **APRIL 2018**
25 hydrogen vehicles deployed to Green Tomato Cars, London
- **AUGUST 2018**
36 hydrogen vehicles deployed to STEP, Paris
- **DECEMBER 2018**
Roissy/CdG Refuelling station opens
- **AUGUST 2019**
2.1 million kilometres driven by ZEFER project vehicles
- **SEPTEMBER 2019**
10 tonnes of hydrogen dispensed to Green Tomato Cars hydrogen vehicles
- **OCTOBER 2019**
10 hydrogen vehicles deployed to Metropolitan Police Service
- **NOVEMBER 2019**
Additional 25 hydrogen vehicles deployed to Green Tomato Cars
- **APRIL 2021**
117 hydrogen vehicles on the roads as part of ZEFER
- **NOVEMBER 2021**
60 vehicles by DRIVR in Copenhagen and 180 vehicles deployed thanks to ZEFER on the roads in London, Paris and Copenhagen
- **2022**
End of project



180	vehicles deployed
>99%	availability
8.3 million km	driven



170 km/day	average daily distance
44,000 km/year (hydrogen vehicle)	average annual distance per vehicle
39,000 km/year (non-hydrogen vehicle)	
12,647 km	farthest driven by a vehicle in a month



193 km	between refuels
8,291 km	farthest driven by one taxi in a month
30,485 kg	of hydrogen used by ZEFER Hype taxis

