

HYTEC

Hydrogen Transport in European Cities (Contract number 278727)



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Air Products

0. Project & Partnership description



General Overview

- Hydrogen Transport in European Cities
- Duration: 3 years, 6 months
- Total Budget 29.5m€,
- Project funding 11.9m€

Partnership description

- 16 partners
- 5 Member States represented
- Industry, SMEs, research & local government represented





Project Aims / Overview

- Expand network of demonstration sites in Denmark & UK
- Deploy fleets of next generation H₂ fc vehicles in three different vehicle classes
 - Taxis
 - passenger cars
 - scooters
- Operate urban fleet operations, putting H₂ fc vehicles into hands of real users
- Deploy publicly accessible fuelling stations in London and Copenhagen
- Deliver a research program that assesses technical performance of the vehicles
- Carry out a life cycle assessment of the vehicles to confirm the well to wheels
- Investigate the non-technical barriers through accompanying social studies



WP1 Project Management

- **Change to project scope**
 - The DoW has been updated to reflect the reduced number of taxis being deployed, and efforts to bring additional OEM passenger cars to London.
 - The changes have been formalised with the FCH JU and have been accepted by the Project Office
- **General Assembly of Partners held**
 - Teleconference May 2012
 - Meeting in person November 2012
 - Also – regional partner's meetings (UK / Denmark) and monthly updates to partners via email from the project coordinator



WP2 Vehicle Deployment

- **London**
 - Five fuel cell hybrid black taxis delivered to London in July 2012.
 - Used for VIP transport services during the Olympics and Paralympics.
 - Five new fuel cell hybrid scooters will be delivered in 2013 and used by London Metropolitan Police.
 - Passenger car fleet to be delivered in 2013.
- **Copenhagen**
 - City of Copenhagen has signed a contract with Hyundai following a tender exercise
 - 15 fuel cell vehicles to be delivered in April 2013





WP3 Infrastructure Deployment

- **London**

- publicly accessible H2 refuelling facility installed at Heathrow airport in July 2012.
- operated over summer 2012 offering 350 bar fuelling.
- upgrade of the station during winter 2012. 350 bar and 700 bar filling available in spring 2013.

- **Copenhagen**

- First of 3 fuelling stations for Copenhagen area to be delivered in 2013





WP4 Vehicle & Infrastructure Operation

- **London**
 - taxis successfully collected and delivered guests during the Olympic and Paralympic Games.
 - taxis covered more than 2,500 miles (4,000 km) over the period.
 - refuelling occurred approximately every four days throughout the Olympics and Paralympics.
 - majority of fuelling events were carried out by trained staff/drivers at the unmanned station





WP5 Vehicle safety and certification activities

- **London Taxis**

- Taxis were approved as safe to operate under the trial conditions
- Taxis meet full statutory UK certification requirements for road operation and for licensing as a London taxi
- European Whole Vehicle Type Approval is no longer being sought
- PCO certification for the HyTEC taxis is not being sought, so the vehicles cannot carry fare-paying passengers. They are therefore being used for VIP operation
- Task 5.5 will deliver a report on the certification requirements and lessons learned from the process.





WP6 Data analysis and reporting

- **1. Defining data and analysis protocols**
 - protocol for collecting and providing data related to taxi operation was tested
 - a web portal for data exchange will be delivered
- **2. Regular technical data updates**
 - online data portal will be available for partners to view information on the operation and reliability of the vehicles used
- **3. Life cycle analyses**
 - life cycle cost (LCC) analysis for the vehicles in the project will be delivered. Interim report expected September 2013.
- **4. Societal impact work**
 - questionnaires completed by the taxi drivers
 - public surveys and interviews with decision-makers in urban fleets to be delivered later in the project

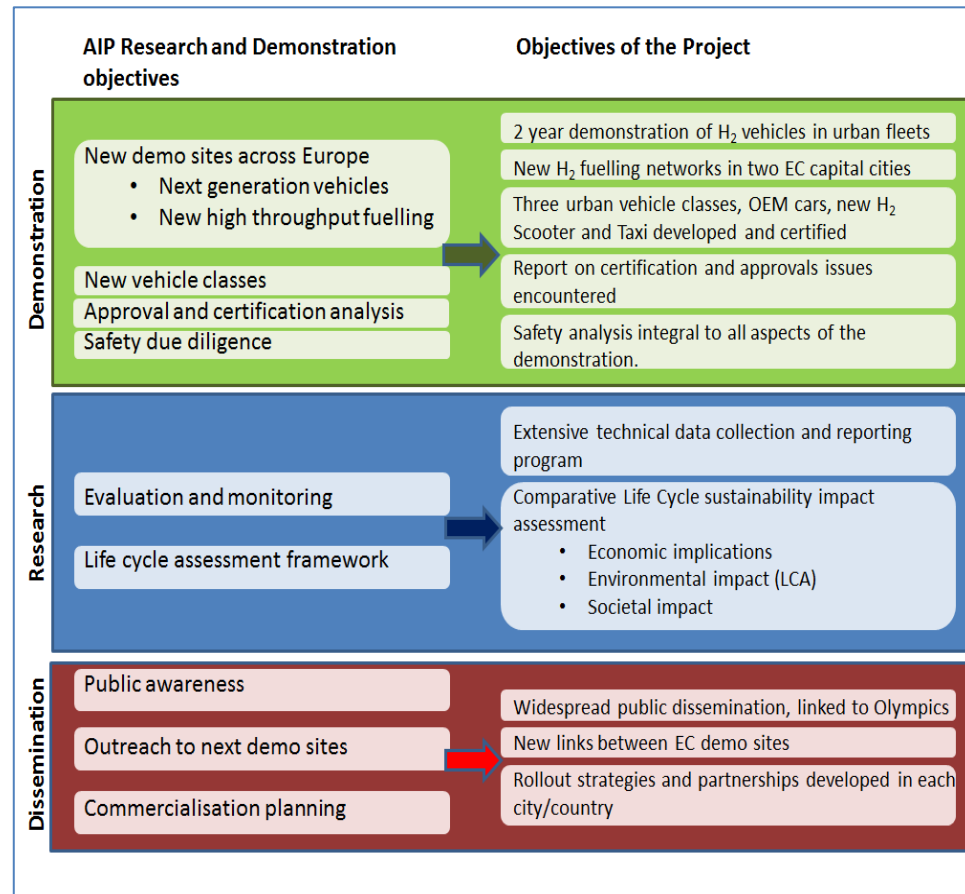


Project Goals

- Main technical objective is to demonstrate a combined H₂ vehicle & fuelling system for urban fleet operations, capable of satisfying technical requirements of fleet customers– without compromise

Project Goals – aligned to AIP

- Objectives aligned to AIP remain as described in the project plan
- Early stage of project deployment means results are limited at this stage – though some details can be reported



2. Alignment to MAIP/AIP (2)



Expected output AIP	Project Deliverable	Status (Oct 2012)
<i>New Demo Sites Across Europe</i>	<i>2 Year Demonstration of H2 vehicles</i>	Demonstration of taxi fleets in London Delivery of 350 bar station into London
<i>New vehicle classes</i>	<i>Delivery of Taxis, Scooters and Passenger cars</i>	Fleet of 5 taxis delivered
<i>Approval and certification analysis</i>	<i>Taxis approved for activity in London</i>	Lessons learned analysis underway regarding taxi certification
<i>Safety due diligence</i>	<i>Taxis and fuelling station delivered safely into London</i>	Lessons learned of delivering a publically accessible fuelling station in London underway
<i>Public awareness</i>	<i>Widespread public dissemination</i>	Extensive PR during Olympics delivered with positive message for hydrogen in London. Positive engagement with London Mayor's office. Some negative PR at start of the project mitigated by project team. Positive PR associated with results of Copenhagen tender exercise



WP7 Dissemination & Public Awareness

• General

- Dissemination materials:
 - videos, photos, pop up exhibition stand,
 - project flyers & factsheets
- *Sustainable2Wheels*, Brussels, Sept2012

• London/UK Activities:

- Event at London Mayor's office
- Press release during Olympics & Blog of taxi operation:
<http://hydrogentaxi.tumblr.com/>
- EuroNews education film <http://www.youtube.com>
- Local politician & UK government minister visited station / ride in taxi



London



<http://hy-tec.eu/>

• Copenhagen/Denmark Activities:

- Sept 2012 event - EU projects in Sound region between Denmark and Sweden. With EC commissioner drive in Hyundai ix35 FCEV
- Danish version of [HyTEC website](#)
- Press announcement on delivery of Hyundai ix35 FCEV



Copenhagen

4. Enhancing cooperation and future perspectives



- Technology Transfer / Collaborations
- Project Future Perspectives
 - Work underway in these areas – will be addressed as part of WP8
 - Extensive interaction with national hydrogen programme objectives planned for UK and Denmark with emphasis on the demonstrating cities
 - Stakeholder events planned for 2013 will increase interaction with other stakeholders and projects



LONDON HYDROGEN PARTNERSHIP



elementenergy



MAT GAS



Thank you!

QUESTIONS ARE WELCOME....