

TIMEFRAME OF MOBYPOST

2011// DESIGNING

Vehicle

- o Definition of system requirements
- o Simulation and modeling studies of powertrain
- o Style and ergonomic studies
- o Mechanical Engineering

Infrastructure

- o Definition of system requirements
- o Dimensioning of equipment
- o Safety and regulation analysis
- o Design of monitoring system

2012// BUILDING

Vehicle

- o Final design and test of powertrain
- o Construction of vehicles
- o Homologation

Infrastructure

- o Photovoltaic generator installation
- o Modification work on existing buildings
- o Installation of electrolyser, H2 storage, H2 refuelling station
- o Certification

2013// TESTING

- o Training for postmen
- o Field tests
- o Data analysis
- o Dissemination & knowledge transfer

For more information: www.mobypost-project.eu. We keep you up-to-date with the project's latest progress.

WWW.MOBYPOST-PROJECT.EU

MOBYPOST PARTNERS

 La Poste www.laposte.com France	 MES www.mes.ch Switzerland	 UTBM www.utbm.fr France	 H2Nitor s.r.l. www.h2nitor.com Italy	 DUCATI energia S.p.A. www.ducati.com Italy
 Institut Pierre Vernier (Coordinator) www.institut-vernier.fr France	 Steinbeis-Europa-Zentrum www.steinbeis-europa.de Germany	 European Institute for Energy Research www.eifer.uni-karlsruhe.de Germany	 Mahytec Sarl www.mahytec.com France	

This project is co-financed by European funds from the Fuel Cells and Hydrogen Joint Undertaking under FCH-U-2009-1 Grant Agreement Number 256834.



CONTACT

COORDINATOR
 Nathalie Oriol
 Institut Pierre Vernier
 E-mail: nathalie.oriol@institut-vernier.fr

PROJECT OFFICER
 Enrique Ciron
 Fuel Cells and Hydrogen Joint Undertaking
 E-mail: Enrique.Ciron@fch.europa.eu



MOBILITY WITH
 HYDROGEN FOR
 POSTAL DELIVERY

MOBYPOST IN A NUTSHELL

Carbon neutral vehicle with novel technology based on a solar hydrogen fuel cell system

MobyPost is a European project aimed at developing a sustainable mobility concept by delivering a solar-to-wheel solution.

The first core element of this environmentally friendly and novel project is the development of ten electric vehicles which will be powered by hydrogen cells, and conceived and designed for post delivery use.

Besides, the development of two hydrogen production and refueling stations is a second core component of MobyPost. These will be built in the French region Franche-Comté, where photovoltaic (PV) generators will be installed on the roofs of two buildings owned by project partner La Poste and dedicated to postal services. The PV generators allow for the production of hydrogen through electrolysis. Hydrogen is stored on site in low pressure tanks where it is available for refuelling the tanks of the electric vehicles, the latter being powered by an embedded fuel cell producing electricity that directly feeds the electric motors.

The project develops and tests under real conditions two fleets of five vehicles for postal mail delivery. Consortium partner La Poste will run the field tests in close coordination with other project partners involved.

The advantages of this solar-to-wheel solution are manifold, as energy will be produced:

- o autonomously
- o locally
- o following environmentally friendly principles
- o under proven safe conditions
- o enabling the availability of energy on demand (since hydrogen produced but not immediately required will be stored)

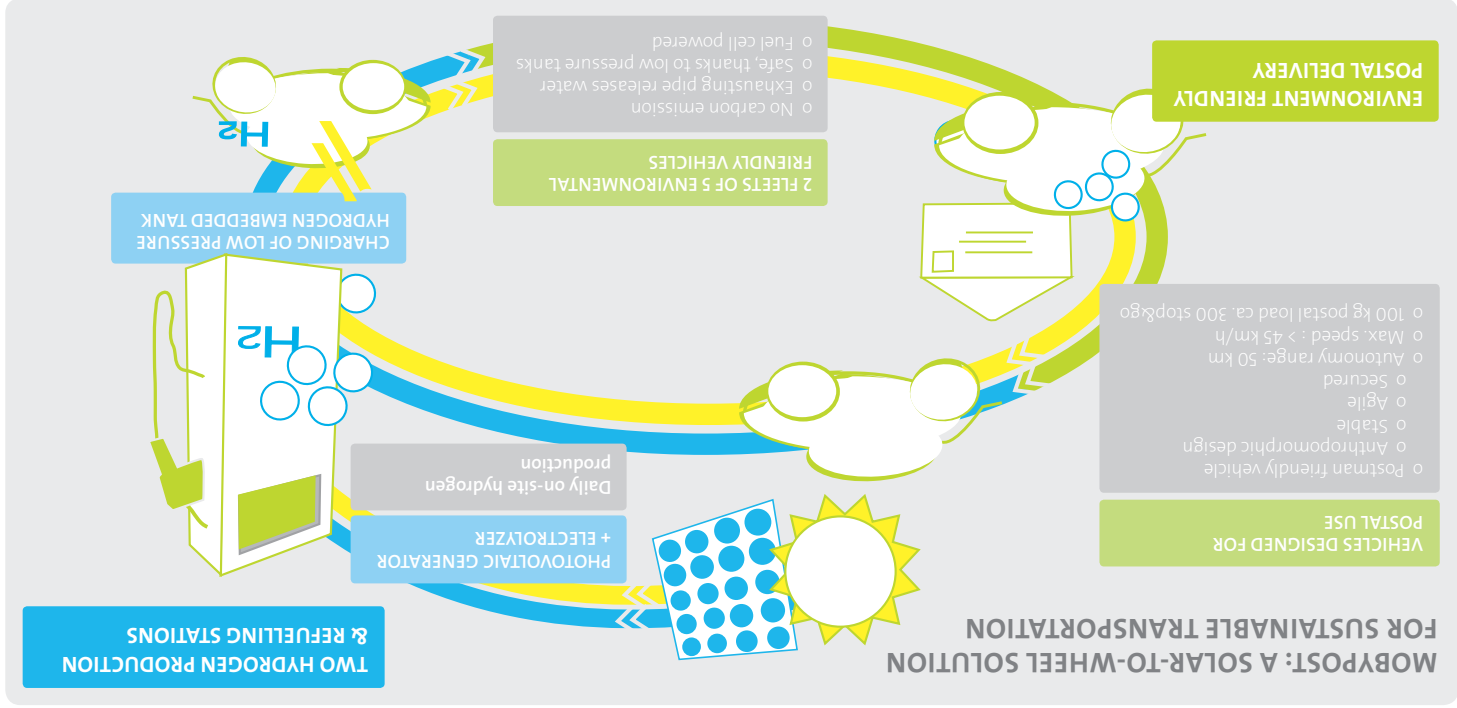
The best is that there will be almost no greenhouse gas emission all along the energy production and consumption cycle.

PROJECT OBJECTIVES

MobyPost follows a global approach by taking into consideration a wide range of aspects to develop a unique autonomous system. The aims of the project can be summarised as follows:

- o Enable a sustainable mobility concept based on a solar-to-wheel solution by developing ten fuel cell electric vehicles (FCEV) meeting ecological requirements for the future
- o Develop a concept for FCEV aimed at improving ergonomics of postal delivery vehicles
- o Design and build two autonomous stationary hydrogen production and refuelling infrastructure sites, each of them capable of feeding 5 FCEV all year round
- o Demonstrate the relevance and reliability of the system, improve the lifetime of the developed solution in real working conditions
- o Reduce the carbon footprint of postal delivery

MOBYPOST: A SOLAR-TO-WHEEL SOLUTION FOR SUSTAINABLE TRANSPORTATION



TECHNOLOGICAL BREAKTHROUGHS

1. Complete solar-to-wheel solution developing an innovative concept for fuel cell electric vehicles and incorporating hydrogen production into existing postal buildings for its utilisation on the spot
2. Fuel cell electric vehicle used every day on heavy duty cycle and under demanding climatic conditions (including summer and winter time)
3. Autonomous energy production – Hydrogen is produced in an autonomous way by coupling an electrolyser to solar energy and it is directly available to be used by MobyPost vehicles
4. Guaranteed safety with low pressure storage – MobyPost im-

IMPACT

- o Contribute to the attainment of EU's objectives in terms of sustainable development and environment protection
 - o Favour the transferability of developed technologies to other delivery services
 - o Accelerate and effectively support the emergence and consolidation of the FCEV industry
 - o Disseminate the project outcomes at local and European scales in order to promote innovative and sustainable transportation means
- lements metal hydride tanks for hydrogen storage, which considerably improves the safety onboard