

HDGAS



Heavy Duty Gas Engines integrated into Vehicles

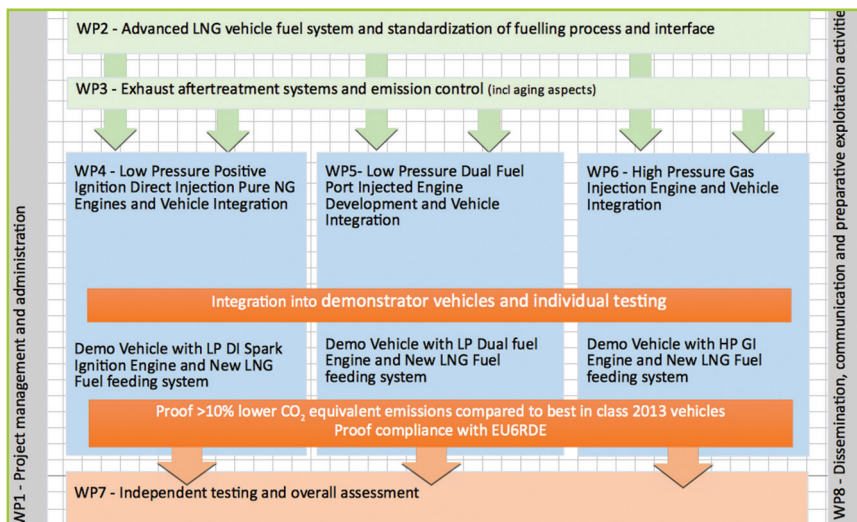
MOTIVATION AND OBJECTIVES

The overall objective of the HDGAS project is to develop, demonstrate and optimise advanced powertrain concepts for dual-fuel and for pure Natural Gas (NG) operation engines, perform integration thereof into heavy duty vehicles and confirm achievement of Euro VI emissions standards, in-use compliance under real-world driving conditions and CO₂ or greenhouse gas targets currently under definition.

To realise the full potential of NG powered vehicles, the following technical objectives will be addressed:

- To specify technical requirements and international/European standards of Liquefied Natural Gas (LNG) fueling interfaces and fueling process for heavy duty vehicles (trucks and buses).
- To develop an advanced LNG fuel tank system.
- To develop and demonstrate new generations of exhaust aftertreatment systems and low emission technologies for dual fuel and gas engines allowing real driving emissions below Euro VI limits for heavy duty vehicles.
- To develop and demonstrate advanced $\geq 10\%$ more fuel-efficient direct Positive Ignition natural gas engines and powertrains suited for heavy duty vehicles and integrate the engine and a new fuel system on a vehicle.

PROJECT PLAN



TECHNICAL APPROACH

HDGAS will develop all key technologies (LNG fuel system including High Pressure tank design, compact and insulation in tank, cryogenic pump, aftertreatment systems), and three engines as well as new fuel systems will be integrated into three demonstration vehicles. HDGAS will also prepare a plan for a credible path to deliver the innovations to the market. The exploitation plan will be proportionate to the scale of the project and contains measures to be implemented both during and after the project.

ACHIEVEMENTS

- Advanced LNG vehicle fuel systems and aftertreatment systems/emission control
- Development of Natural Gas engines, Dual Fuel engines and controls
- System integration into Demonstration vehicles
- Evaluation and independent testing
- Market introduction at selected fleet owners and markets
- Further optimisation of components and systems
- Ramp up production of vehicles

Budget	27.8 M€	Funding	19.9 M€
Duration	36 months	Start	May 2015
DG	Research & Innovation	Contract n°	653391
Coordinator	Theodor Sams, AVL List GmbH	Contact	theodor.sams@avl.com
Partners	19 partners including Daimler, IVECO, Volvo, MAN, Ricardo, FPT Powertrain Technologies		
Website	www.hdgas.eu		

