

## FPT INDUSTRIAL HOSTS HDGAS PROJECT FINAL EVENT TO DISCUSS THE RESULTS FOR NATURAL GAS TECHNOLOGIES

Turin, April 11, 2018

After three years of work, **FPT Industrial** welcomes all partners of the **HDGAS** project to the CNH Industrial Village in Turin on April 11th. On this occasion, the results of this **36-month research** are presented to the public, and all players have the chance to discuss future steps.

HDGAS stands for “**Heavy Duty Engines integrated into Vehicles**” and is part of “**Horizon 2020**”, the **European Union Commission** programme for Research and Innovation, under Grant Agreement No. 653391. The project started on May 1 2015 and consists of **twenty partners** – OEMs, engineering service providers, universities and research institutes – from nine countries.



PRESS RELEASE



*HDGAS Cursor 13 Natural Gas*

The aim of the project was to develop **advanced non-hybrid powertrain concepts for heavy-duty vehicles** (either dual-fuel or optimized for pure natural gas operation), complying with Euro VI emissions standards and meeting the current CO<sub>2</sub> or greenhouse gas emission targets. Successful outcomes could be **air quality improvement** – especially considering particle numbers and NO<sub>x</sub> in real driving conditions – and a **reduction of the involvement of heavy duty vehicles in climate change**. The developed products had to be convincing also in other terms, such as performance, engine life, cost of ownership, safety and comfort.

In order to succeed, the project was divided into **six sections**. **FPT Industrial** was the leader of **section 4**, which is concerned with the **low pressure direct injection spark ignited engine**. FPT Industrial, together with its partners (IVECO, Ricardo, AVL, Polytechnic of Milan, TUG and BorgWarner), developed two versions – stoichiometric and lean burn – of a **new direct positive ignition Natural Gas engine**, capable of reaching a **10% increase in fuel efficiency** and a **10% reduction of greenhouse gas emissions**. At the same time, the research had to result in an **improved performance of 10%** (compared to current engines), and a vehicle range higher than 800 km.

The starting point for the research was the FPT Industrial **Cursor 13 Natural Gas** engine: at the beginning of the process new content – never tried before on an Heavy Duty engine – was added. This included a **combustion system**, a **fuel direct injection system**, a **Corona ignition system**, a **variable valve timing** and an **hydraulic valve lash**. FPT Industrial then assembled three prototype engines, which were delivered to Ricardo, for installation of the lean burn version at the test bench, and IVECO for installation on a demonstrator vehicle. IVECO also provided its Natural Gas powered sustainable vehicle range (the new Daily Blue Power Hi-Matic Natural Power, the Eurocargo CNG and the new Stralis NP 460) available for the test drive during HDGAS Final event. FPT Industrial, instead, was in charge of the installation of the stoichiometric version of the prototype at the test bench. **FPT Industrial's stoichiometric engine produced great results: the targeted performance (2,200 Nm @ 1,000 rpm – 370 kW @ 1,900 rpm) was reached**, as well as the **10% CO<sub>2</sub> reduction** compared to 2013 state-of-the-art Natural Gas engines. Moreover, **the fuel consumption proved to be well below the target of 200 g/kWh**.



*Annalisa Stupenengo, FPT Industrial Brand President*

The event was opened by **Annalisa Stupenengo**, **FPT Industrial Brand President**, who welcomed the audience underlining the importance of HDGAS research: “*Environmental issues are becoming more and more dramatic by day and we all are called to do our best to contain the damage. This is why we not only have to reduce CO<sub>2</sub> emissions, but pollutants as well. In order to succeed, there is now only one solution, which is **environmentally-friendly, cost-compatible and immediately viable: Natural Gas**. The HDGAS project embodies this philosophy. Gas engines offer all the advantages of traditional thermal engines - including their reliability -, their Cost of Ownership is competitive and with a low pump cost. Finally, methane is a fossil gas which can be also generated as a renewable fuel – by recycling organic waste – reducing CO<sub>2</sub> emissions near to zero. Therefore, for the heavy-duty transport, Natural Gas is an efficient solution today, and will be the perfect candidate to drive the transition towards the ‘green’ transport of the future, a future which is closer than we think.*”

*FPT Industrial is a brand of CNH Industrial, dedicated to the design, production and sale of powertrains for on and off-road vehicles, marine and power generation applications. The company employs more than 8,000 people worldwide, in ten manufacturing plants and seven R&D Centres. The FPT Industrial sales network consists of 93 dealers and over 900 service centres in almost 100 countries. A wide product offering, including six engine ranges from 42 hp up to 1,006 hp, transmissions with maximum torque of 200 Nm up to 500 Nm, front and rear axles from 2 to 32 ton GAW (Gross Axle Weight) and a close focus on R&D activities make FPT Industrial a world leader in industrial powertrains. For further information, visit [www.fptindustrial.com](http://www.fptindustrial.com).*

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