

## **HD trucks powered by LNG in Poland – road test results**

Warsaw, August 23<sup>rd</sup> 2016

**Significant fuel cost decrease and reduction of exhaust gases emission – these are two main conclusions of half year road tests of Iveco Stralis LNG at Poland. Carriers providing transport services for IKEA welcomed the operation of tractors powered by liquefied natural gas (LNG). Road tests were possible thanks to Iveco Poland and Cryogas M&T Poland. Iveco disposed 3 Stralis Natural Power and assured maintenance support. Cryogas provided liquefied natural gas and LNG refuelling installation.**

Thanks to cooperation of IKEA Distribution North Europe, Cryogas M&T Poland and Iveco Poland, crucial barriers in using LNG as a fuel in Poland were passed. In road tests participated 5 carriers, which executed transport service for IKEA Distribution Services. The main aim of road tests was check, if it is possible to decrease of CO<sub>2</sub> emission.

For half of the year at IKEA Distribution Centre in Jarosty, Cryogas established access to LNG refuelling point and supplied natural gas. Thanks to this infrastructure, carriers had possibility to be introduced how looks operating of vehicles powered by LNG, including LNG refuelling process. Results of road tests shown, that operating with LNG vehicle is not different in relation to diesel powered trucks.

Road test was executed by 3 Iveco Stralis AT 440S33 TP LNG. Vehicles passed 40,000 km. Average fuel consumption was 24,9 kg/100 km (average mass of transported goods by truck was 15,3 t). For the same activity relevant Diesel trucks consume 30,4 L/100 km. In result, CO<sub>2</sub> emission reduction was possible by 7%, as well dispose of particular matters emission. Fuel cost was reduced by 30% (including cost of AdBlue).

Tested Iveco Stralis LNG Natural Power was powered by 330 HP Cursor 8 NG engine and met the EURO VI emission standard. It was equipped with a cryogenic LNG tank with a capacity of 510 litres and 4 CNG tanks of 70-litres. Natural gas stored in system provided total range of 750 km (600 km on LNG and 150 km on CNG) and it was perfectly suited for medium distances.

Refuelling installation provided by Cryogas made possible effective LNG refuelling during tests. Detail indication of refuelled LNG was possible thanks to mass flow meter. Management of a comprehensive project investment process and installation of an LNG refuelling station was conducted by Cryogas M&T Poland S.A. In scope of the supply was included obtaining necessary permits, engineering the complete project design, execution of works according to the requirements of the Polish Office of Technical Inspection, obtaining the occupancy permit (complete FEED and EPC process). Executed works were implemented by Cryogas technical division, which gathered experience in previous projects. In Cryogas portfolio are included setting of several LNG regasification stations and LNG refuelling stations in Śrem and Olsztyn.

### **Main road test's results**

- Exhaust emission reduction – elimination of particulate matter (soot) emission, reduction of CO<sub>2</sub> emissions by 7%, use of a simply and lighter exhaust gas cleaning system
- Fuel cost reduction by 30% (through better calorific value of methane than diesel fuel, no need to use AdBlue)
- Noise reduction

### **Challenges regarding to operations with LNG trucks**

- Range of 750 km – extension of distance covered on one refuelling (LNG trucks with 1.500 km soon available on market)
- Engine power – 330 HP suitable for most of application, but 400 HP will be more convenient for long distance transport



- Access to LNG station – at the moment 3 LNG stations available in Poland, until 2025 net of LNG station will be entered into operation along main roads (A1, A2, S3, A4, S7, S8 and S61)

### **Cryogas M&T Poland**

Cryogas is a renowned supplier of natural gas with many years of experience on the LNG market. Company offers wholesale supplies of LNG for vehicles refuelling, distributors and end consumers with LNG stations throughout Poland. Cryogas offer is dedicated to companies seeking to use LNG for their technological processes, production of heat and electricity and as vehicle fuel. As a supplier of LNG, Cryogas offers innovative solutions in the scope of investments related to the construction and operation of power installations. Cryogas team of highly skilled experts is at Customers disposal and may assist in all matters related to construction of LNG/CNG refuelling stations, regasification and supply facilities.

### **IVECO**

Iveco is a brand of CNH Industrial N.V., a World leader in Capital Goods listed on the New York Stock Exchange (NYSE: CNHI) and on the Mercato Telematico Azionario of the Borsa Italiana (MI: CNHI). Iveco designs, manufactures and markets a wide range of light, medium and heavy commercial vehicles, off-road trucks, and vehicles for applications such as off-road missions.

The brand's wide range of products include the Daily, a vehicle that covers the 3 – 7 tonne vehicle weight segment, the Eurocargo from 6 – 19 tonnes, the Trakker (dedicated to off-road missions) and the Stralis, both over 16 tonnes. In addition, the Iveco Astra brand builds off-road trucks, rigid and articulated dumpers as well as special vehicles.

Iveco employs close to 21,000 individuals globally. It manages production sites in 7 countries throughout Europe, Asia, Africa, Oceania and Latin America where it produces vehicles featuring the latest advanced technologies. 4,200 sales and service outlets in over 160 countries guarantee technical support wherever an Iveco vehicle is at work.

For additional information please contact with:

### **Cryogas M&T Poland**

**Karol Wieczorek**

**Tel. +48 720 800 392**

**Email: k.wieczorek@cryogas.pl**