

Could Natural Gas Become a Popular Motor Fuel throughout the World?

KEY CONCLUSIONS

The growing role of gas in the transport industry

"Today, the automotive industry is undergoing a period of global change – the transition to new types of fuel is solving environmental and economic problems. KAMAZ gas engine equipment has already become a popular mass-produced product. Customers first and foremost consider a vehicle's fuel economy, which is obvious. Therefore, the sales volumes of gas-powered cars and buses will rapidly increase. This year we are launching exports – in the coming month the first batch of gas-powered vehicles will be delivered to Uzbekistan, where there are no problems with gas filling infrastructure", KAMAZ General Director Sergey Kogogin said.

"Per the gas infrastructure development plan, gas consumption in China should reach 10% of all energy resource consumption by 2020. In 2017, China registered 6.8 million natural gas vehicles, of which 5.73 million run on compressed gas and 350,000 run on liquefied gas. In 2017, these cars consumed 12 billion cubic metres of gas. China ranks first in the world by the number of gas filling stations with 8400 stations throughout the country. The Chinese government has plans to switch to NGV fuel and water transportation. I believe that natural gas is an important way to address the environmental challenges China faces", Deputy Administrator at the National Energy Administration of China Shanqing Lin said.

"At present, the world has 23 million gas-powered vehicles, and this should be moving up to 1.3 billion. The role of gas is growing in the transport segment. The fleet of electric cars is growing much faster. We need to do a lot of work. All analysts pay attention to three things. First, a change in the level of technology. Infrastructure is second and a critical factor [...] The third point is the price issue", S&P Global Platts President Martin Fraenkel said.

The Russian NGV fuel market has enormous potential

"Forty percent of the world's methane reserves are concentrated in Russia. The country has 170,000 kilometres of gas pipelines thanks to which we can build gas stations everywhere using the existing network. We don't need to have something supplied or mix it, and the loss factor is reduced", Chairman of the Gazprom Board of Directors and Russian Special Presidential Representative for Cooperation with the Gas Exporting Countries Forum Viktor Zubkov said.

"Gazprom is the biggest investor in gas-filling station infrastructure with more than RUB 13 billion of investment. We have already installed 280 stations with total capacity of over 2 billion cubic metres of gas per year. Moscow has launched the most powerful gas filling station in Europe, which can fill 2,000 cars a day. Our goal is to create a network of five hundred facilities and the necessary conditions to further develop infrastructure for compressed and liquefied natural gas-filling complexes. The 172,000 km of gas pipelines and 700,000 km of distribution networks we have in Russia allow us to develop local NGV fuel markets in the Russian regions today", Zubkov said.

PROBLEMS

A lack of infrastructure for the development of the NGV fuel market

"The fundamental issue here is the establishment of the required number of filling stations and how to make it so that gas-powered vehicles could refuel at them", Chairman of the Sasakawa Peace Foundation and Executive Director of the International Energy Agency (2007–2011) Nobuo Tanaka said.

Insufficient interest among consumers and manufacturers

"For example: we built an NGV refuelling station in Khimki for 2,000 cars per day. Its utilization rate is 10%. The average utilization rate of gas stations is 27%. We are operating at a loss for now. We nevertheless believe this is the most promising area that Russia should work on", Zubkov said.

"Russia has now started manufacturing gas cylinders for automobiles, but everything associated with injection devices is produced outside our country", Kogogin said.

SOLUTIONS

Execution of President Putin's instructions to develop the NGV fuel market

"The president supports this focus. The Ministry of Energy has been designated as the agency in charge of developing the NGV fuel market. [...] Russian industry should take measures to increase the production of NGV vehicles [...] The regions should be responsible for the development of the NGV fuel market. There will now be an assessment in governors' performance indicators for the year based on the development of this segment", Zubkov said.

Transfer public transport to NGV fuel

"Today we are launching two pilot projects in the Rostov and Belgorod Regions, where all types of public transport, municipal and utility service transport, small and large commercial transport, school buses, taxis, and agricultural transport will switch to NGV fuel. We will solve the problem by converting traditional vehicles to NGVs with the establishment of special certified enterprises, which are virtually non-existent in Russia right now. We will be able to present this project's economic and environmental effect by 2020", Zubkov said.

Production of new types of NGVs

"Within two years we will deliver the first batch of gas-powered shunting locomotives. We have created a gas-turbine locomotive. It's a unique turbine that is installed on a locomotive with enormous traction, carries a record number of trains, and has been operating in test mode on Sverdlovsk Railway for two years. The same machines can also be used in river transport", Tube Metallurgical Company (TMK) and Sinara Group Chairman of the Board of Directors Dmitry Pumpyansky said.

Switching the fleet of major companies to NGV fleets

"A few years ago, we decided to transfer our fleet to NGV fuel. We have about 32,000 cars at the company. Today, 40% of our transport runs on natural gas, with 9,000 tonnes less of harmful substances being discharged into the atmosphere. This is only one company. If other companies follow suit, imagine how we will improve the atmosphere in the cities", Zubkov said.

Improving the competitiveness of NGV fuel

"The market is the main thing that will dictate the development of NGV fuel. Not sanctions or the opinion of America [...] Compared with other fuels, natural gas is particularly interesting in terms of preserving the environment. If gas is supplied at a favourable price, there is no doubt about the prospects for its use", Tanaka said.