Analysis of the state of the fuel market of the Russian Federation and its development prospects

Yu. N. Bezborodov, V. G. Shram, V. I. Vereshchagin, A. N. Sokolnikov, M. A. Kovaleva

Siberian Federal University, Institute of Oil and Gas

One of the main causes of excessive pollution by the exhaust gases of our megacities is the extremely low quality of automotive fuel.

The second reason for the intense poisoning of the air of large Russian cities with exhaust gases with a high concentration of pollutants is old cars. Emissions of such cars are several times more toxic than modern cars equipped with exhaust gas neutralizers.

The third reason for the excessive pollution of the atmosphere of our megacities by automobile emissions lies in one of the main ills of Russia - roads. Due to the fact that they are too narrow, and even with many intersections and traffic lights, cars often have to stop, stand in traffic jams for hours. At every traffic light and in places where traffic jams occur, the amount of car emissions is too high, since during idle and speed settings, the maximum volumes of exhaust gases are emitted.
To reduce the amount of harmful automobile emissions into the atmosphere, a whole range of methods is used:

1. Continuous improvement of engine models and reduction of car bodies in order to minimize their fuel consumption.
2. The use of environmentally friendly fuels.
3. Supply of exhaust pipes of automobiles with neutralizers. In developed countries, cars are forbidden to appear on the roads without these "filters" for cleaning exhaust gases.
4. The introduction of automated traffic control systems in order to reduce the time of operation of automotive engines in idle mode and set speed.
5. Creating a zone of greenery along the roads. This measure allows one to half reduce the harmful effects of automotive emissions on the environment. One tree per year absorbs the volume of exhaust gases emitted by the average machine for 25,000 kilometers.
6. Transfer of vehicles to GMT.
Thus, environmental problems in the production and consumption of fuel, as well as the limited proven reserves of oil, dictate the need for the development of alternative fuels, in particular gas-engine fuel, the use of which has great prospects today.

At the same time, despite a number of advantages of using gas as fuel, the development of the market requires not only the creation of a developed infrastructure and the improvement of gas utilization technologies, which requires significant investments, but there is also a need to improve legislation in the fuel industry to create effective government regulation.

However, the main factors hindering the development of the gas motor fuel market today are: high investment cost of projects, dependence of project implementation on the state, limited offers to provide specialized equipment.