

Report of the Workshop on Decarbonizing Transport with Natural Gas

The workshop “Decarbonizing Transport with Natural Gas” was organized jointly by the United Nations Economic Commission for Europe (UNECE), the Russian Energy Agency of the Russian Ministry of Energy, the Natural Gas Vehicle Association of Russia, and PJSC Gazprom.

The workshop was held on 8 October 2021 in the framework of the 10th St Petersburg International Gas Forum. The event was conducted in hybrid format and attended by 70 participants in-person and online. It was also broadcasted online in English and Russian.

The workshop aimed to discuss the state of affairs in development of the compressed (CNG) and liquefied natural gas (LNG) market, as well as the prospects for development of the natural gas vehicles (NGV) market in the context of decarbonization of the transport sector to reduce the carbon footprint of transport services.

During the workshop, UNECE presented the main findings and recommendations of the [analytical report](#) on the use of gas in transport, its key recommendations and country specific guidelines. The report focuses on natural gas vehicles (NGV) as an effective approach for a sustainable transition in transport and describes the state-of-the-art of NGV markets in 14 countries. The report is part of the project [Improving capacities of the UNECE member States to decarbonize the transport sector by increasing the use of natural gas as a motor fuel](#)” funded by the Russian Federation and covering Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Kazakhstan, Kyrgyzstan, Moldova, North Macedonia, Romania, Serbia, Tajikistan, Turkmenistan and Uzbekistan.

“Increasing the share of gas in transport may help decarbonize the sector and achieve a range of other socio-economic goals of the UN 2030 Agenda”, said Mr Francisco de la Flor Garcia, Chair of the UNECE Group of Experts on Gas, in his welcome remarks. Mr. De la Flor also stated that the Group of Experts “has drafted a report on removing barriers to the use of natural gas in maritime transportation”, and he referred to the case study from Spain on small-scale LNG and truck-loading: “We hope that the 50-year experience in Spain in LNG truck-loading may provide a good example for other countries as they decarbonise their transport sectors”.

Mr. Ivan Ivanov, Deputy Director General of the Russian Energy Agency of the Ministry of Energy of Russia, emphasised that the Russian Federation supports the use of natural gas. “Russia adopted a program of subsidies for the purchase of NGV equipment and regional programs for the development of this market. We have made significant progress over the past few years. In total, 190 automobile gas filling compressor stations were commissioned in 2019-2020, of which 125 constructions were subsidized. A significant number of CIS countries are developing their own NGV market and Russia is interested in cooperation with them. The prospects for cooperation can be seen in coordination of programs for the development of NGV infrastructure, as well as in the exchange of experience and technical solutions for the infrastructure. The UNECE project demonstrates the advantages and prospects of using natural gas as a vehicle fuel and contributes to development of partnerships with industry participants in the international market”, said Mr Ivanov.

Mr. Evgeniy Znatnov, Head of Directorate, PJSC Gasprom, indicated that “the transport sector faces many challenges. As environmental, climate and emission requirements tighten, the industry continues to be a highly competitive one to ensure a stable functioning of the economy. Various fuels compete for both market share and price. The ideal response to these challenges is natural gas -- CNG and especially LNG - in freight and maritime transport.”

UNECE presented the overview of situation in the transport sector, environmental gains from the use of natural gas and the UN activities on natural gas in transport in the light of the UN 2030 Agenda.

The workshop participants discussed the use of natural gas in transport in the world, including the state of NGV market development in the UNECE project countries, perspectives of international cooperation in the NGV market, car life cycle analysis and shared their experience in the conversion of heavy diesel engines to alternative fuels.

Mrs. Mariarosa Baroni, President, NGV Italy pointed out that “liquified natural gas and bio-LNG foster decarbonisation of maritime transport and, in parallel, provide a competitive fuel for both developed and developing countries. Natural gas is becoming more prominent for energy systems around the world...”

Mr. Flavio Merigo, Technical Director, World Gas Mobility Council, demonstrated through life cycle analysis that CNG vehicle with only 28 per cent of biomethane has lower “cradle to grave” CO₂ emissions than an electric vehicle, since more than 40 per cent of emissions from electrical vehicle manufacturing comes from the battery.

The session of the workshop was devoted to the NGV market development in the Russian Federation and discussed the Russian complex approach for NGV market development. Two case studies were presented during this session: expanding the use of natural gas as a motor fuel in the Sakhalin region, and pilot project to develop the NGV market in Tatarstan region.

Perspectives of NGV market development in other UNECE countries were also discussed by the participants. Kazakhstan NGV market perspectives and Belarussian NGV market dynamics were presented at the workshop.

The presentations were followed by a discussion among participants and speakers. In particular, the views were exchanged on how to overcome the existing regulatory, legal, economic, technical, and public perception barriers to the use of gas in transport in the UNECE region.

Workshop materials are available at the workshop [webpage](#).