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PRESS RELEASE

New study published: 'CO₂ Emission Abatement Costs of Gas-Fuelled Mobility and other Road Transport Options'

Brussels, 28 April 2021 – Today, the Natural & bio Gas Vehicle Association (NGVA Europe) published its newest study: 'CO₂ Emission Abatement Costs of Gas-Fuelled Mobility and other Road Transport Options' which had been commissioned to Frontier Economics.

- The study analyses and compares CO₂ emissions, the economic costs, and the resulting emission abatement costs of key road transport vehicles, while also illustrating the potential contribution of gas-fuelled mobility (gmobility) alongside other technologies.
- The focus is on the near term (up to 2030) using two vehicle types as examples: passenger cars and trucks. Within each vehicle type, the study compares a range of low-carbon options, including gmobility to a fossil counterpart, using a comprehensive approach rather than focussing narrowly on tailpipe emissions.
- The analysis demonstrates that gmobility is a readily available and attractive complement to the technology mix in transport in 2030 that will be required to effectively and efficiently migrate towards a net-zero carbon mobility sector in Europe. It will therefore be key to ensure that the regulatory framework allows for gmobility to contribute to emission reductions.

Implications and roadmap to 2030:

In 2030, some 1.6 million gas-fuelled passenger vehicles could save 24 million tonnes of CO₂ compared to a similar number of conventional gasoline vehicles over their lifetime at an additional system cost of 2.8 billion Euros. The same fleet of Battery Electric Vehicles (BEV) would cost 6 billion Euros.

For trucks, the 52,000 LNG trucks expected by 2030 would lead to a reduction of over 25.1 million tonnes of CO₂ relative to a similar number of diesel trucks at an additional system cost of around 2.6 billion Euros.

The gas mobility (gmobility) related key results of the study are as follows:

Passenger vehicles

Gmobility, running on a mix of Compressed Biomethane (CBM) and Compressed Natural Gas, (CNG) has similar total emissions to a BEV while vehicles running on pure Biomethane have even lower



emissions than BEVs calculated on a combined Well-to-Wheel (WtW) and manufacturing emissions basis

While a gas vehicle has lower vehicle manufacturing costs, higher biomethane production costs mean that a vehicle running on pure biomethane has a comparable overall cost to a BEV.

At the same time though, gmobility has lower carbon abatement costs than BEVs for all CNG and biomethane fuel mixes. Furthermore, gmobility has a lower range of estimated costs and emissions than BEVs, which reflects the greater certainty around CNG vehicles as a more mature technology when it comes to costs and emissions. Gmobility should therefore be regarded as the most efficient complement to BEVs in order to securely reach the 2030 CO₂-targets.

Trucks

Conventional diesel and LNG trucks have similar overall emissions. Gmobility, using a mix of LNG and bio-LNG, has significant lower total emissions than Diesel-powered trucks.

Regarding the costs, the numbers illustrate that Liquefied Biomethane will be the most expensive in 2030, which will largely be driven by the costs associated with fuel production.

On the other hand, regarding abatement costs, Bio-LNG vehicles have a clear cost advantage. Both the pure bio-LNG and LNG/bio-LNG mix have similar costs when it comes to CO₂ emission abatement; however, pure bio-LNG vehicles offer significantly higher levels of emissions savings.

Policy implications of the study: The regulatory framework must provide a level playing field and allow for gmobility to contribute to emissions reductions in the near term

This analysis demonstrates that gmobility can contribute to reducing GHG emissions in road transport at a comparably low system cost. As gmobility – in contrast to other drivetrain technologies which are less mature – is readily available on vehicle, infrastructure and fuel supply levels and thus is quickly scalable now, it can contribute to the targeted -55% GHG emissions reduction by 2030 at low cost.

Today's fragmented regulatory approach, which is limited to tailpipe emissions for fleet targets, does not reflect the overall system-wide costs and benefits of different low-carbon vehicles.

It is therefore key to ensure that the regulatory framework allows for gmobility to contribute to CO₂ emission reductions. Leveraging the CO₂ emissions reduction only at the tailpipe level does not provide the full picture to ensure the transition to carbon neutral mobility.

NGVA Europe’s Secretary General Dr Jens Andersen commented the publication as follows:

“This newest study is once again proof that gmobility is an essential piece to achieve the necessary aims of the European Green Deal and reach all emissions targets in a very effective, efficient and especially realistic way. To say it clearly: gmobility is fit for 55.

But in order to harness the potential of gmobility and to achieve carbon neutral mobility in Europe, it will be necessary to re-adjust the current regulatory framework to actively support this European key technology by providing a level playing field.”

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- The **full study** can be downloaded as pdf [here](#).
 - It will be presented and discussed at the **NGVA Europe webinar** ‘The contribution of gmobility to carbon neutrality’ which will be held on **4 May**. More info, programme and registration link can be found [here](#).



NGVA
Europe

for sustainable mobility

About NGVA Europe

The Natural & bio Gas Vehicle Association (NGVA Europe) is the European association that promotes the use of natural and renewable gas as transport fuel. Founded in 2008, its 132 members from 27+4 countries include companies and national associations from across the entire gas and vehicle manufacturing chain.

NGVA Europe is a platform for the industry involved in producing and distributing vehicles and natural gas, including component manufacturers, gas suppliers and gas distributors. It defends their interests to European decision-makers to create accurate standards, fair regulations and equal market conditions.

NGVA Europe creates networks among interested stakeholders to reach consensus on positions and actions to expand the market for the natural gas transport system. It also collects, records and communicates reliable facts and significant developments in the market.

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