



Common misconceptions about Autogas

Why is this alternative fuel
not being considered as
part of the energy puzzle?



Common misconceptions about Autogas

Road transport represents almost 20% of Europe's total greenhouse gas emissions (GHG) and is the main cause of air pollution in cities^{1,2}. The European Commission estimates that more than 39% of nitrogen oxides (NOx) and 10% of primary PM_{2.5} and PM₁₀ emissions in the EU come from this sector³. To improve air quality today, we need sustainable transport solutions which are cleaner, accessible and affordable so all EU citizens can be part of the energy transition.

Autogas, which includes vehicles running on renewable liquid gas or LPG, is the number one alternative fuel in Europe⁴. Autogas lowers emissions of NOx by 62%

and particulates by 90%⁵. With over 8.5 million registered vehicles in the EU running on Autogas today⁶, either through new car purchases or retrofits of existing cars, and with over 30,700 Autogas filling stations⁷, European citizens have access to a fuel that can help them get to their destination in a sustainable manner.

Unfortunately, Autogas is often overlooked by EU legislation. The impending ban on internal combustion engines in 2035, the lack of clear definition of CO₂ neutral fuels, creates a risk for consumers to have less access to viable and affordable solutions such as Autogas.



Autogas is an available alternative fuel fit for the green transition

AVAILABLE

30,719

There are over 30,719 Autogas dispensing sites in the EU and more than 81,000 Autogas filling stations globally⁸.



In Poland, 81% of the 9,100 filling stations offer Autogas⁹.



In France, there are over 1,500 Autogas stations, which represents 1/6 of the overall infrastructure¹⁰.



In Italy, there are almost 4,600 Autogas stations¹¹, representing 22% of the total 21,700 stations¹². This infrastructure has been constantly growing, together with the national LPG vehicle fleet.

FIT FOR THE GREEN TRANSITION

100%

The liquid gas industry is on a path to becoming 100% renewable by 2050¹³. Renewable liquid gases are a drop-in solution that can be used in the existing car fleet without the need of making any additional modifications.

Today, renewable liquid gases are produced through sustainable production pathways, using feedstocks recognised in the Renewable Energy Directive (RED).

For instance, a commercialised pathway to produce renewable liquid gas is through the biorefining of Hydrotreated Vegetable Oils¹⁴.



Renewable liquid gases, such as renewable LPG and renewable and recycled carbon DME, are a promising possibility for a more sustainable future¹⁵, and they should be considered as CO₂ neutral fuels¹⁶ in relevant EU pieces of legislation.

Technology neutrality must be ensured to allow a just and affordable transition leaving no one behind, while securing a decrease in emissions with ready-to-use technologies.



AFFORDABLE

Autogas is an affordable¹⁷ and proven solution to address both CO₂ and pollutant emissions. In the past 5 years, Autogas was on average 64% the cost of Euro 95¹⁸. For instance, in Poland, Autogas was on average 49% the price of Euro 95 in 2022¹⁹.

Autogas is future proof

Vehicles powered by Autogas register a significant and constant growth.

7/10

7 of the 10 largest car manufacturers produce LPG cars^{20,21}.

 **16.7%**

While vehicles powered by LPG grew by 16.7% in the last quarter of 2022²², 29 new Autogas car models were launched in 2023 by leading manufacturers such as Renault, Kia, Fiat, Dacia, Lancia²³.

In the first two quarters of 2023, 77,123 new Autogas vehicles have been registered in Italy, and almost 16,000 existing vehicles have been retrofitted²⁶.



In Italy, Autogas is the most popular alternative fuel solution, with 2,9 million vehicles currently running on Autogas, which represents 52% of the vehicle fleet running on alternative energy sources²⁴. In 2022 in Italy, 118,791 new Autogas cars were registered, and 47,000 cars were retrofitted²⁵.



During the first semester of 2023, 34,019 new Autogas vehicles have been registered in France, which represents an increase of 40% compared to the previous year²⁷.



In Poland, the share of passenger cars powered by alternative fuels reached 16.3 % in 2021. This is to a large extent due to a high number of cars retrofitted for Autogas²⁸.

Autogas is a safe alternative fuel that is non toxic, non-corrosive and insoluble in water²⁹.

SAFE AND SIMPLE

Fuelling with Autogas is as safe and simple as filling up with gasoline or diesel. Autogas meets the same standards for safety as conventionally fuelled vehicles³⁰.

Autogas abides by high safety standards



Properly installed Autogas vehicle fuel tanks can add to the structural integrity of a vehicle³¹.

Autogas fuel tanks are 20 times more puncture-resistant, and can withstand far more pressure than typical gasoline tanks³².



Autogas can lower emissions & improve air quality

12%

Passenger cars represent 12% of the total EU emissions of carbon dioxide (CO₂) and are the largest source of air pollution in cities³³.

Renewable gases can lower the carbon footprint of LPG by around 80% while offering air quality benefits³⁵. They offer a great opportunity to defossilise the set of available fuels for the present and future vehicle fleet in the EU.



Autogas is the most available and reliable solution to help tackle CO₂ and pollutant emissions: compared to petrol, it emits up to 21% less CO₂, 62% less NOx and 90% less PM on a well-to-wheel basis. Compared to diesel, it emits 96% less NOx and 92% less PM³⁴.

Renewable & recycled carbon DME is a liquid gas chemically similar to LPG, which can be blended with LPG or used on its own in Autogas cars³⁶.



Autogas is easy to use and accessible

Retrofitting a car so it can run on liquid gas is an easy and affordable solution. The boot volume above the floor remains the same, as the LPG tank is installed in place of the spare wheel³⁷.

A car running on LPG not only pollutes less, but it is also cheaper and has a greater autonomy than a vehicle running only on traditional fuel.



Autogas can be used in combination with other energy sources, offering the best of both worlds³⁸. For example, Autogas vehicles can typically run on either petrol or LPG, as they are equipped with two separate tanks, one for petrol and one for LPG. With both tanks full, these vehicles can have a cumulative range of over 1,000 km. This operation ensures an unlimited radius of circulation: petrol can be found in all stations and LPG is present in 1 station out of 4 on average in Europe and in 1 station out of 6 on average in France. Some hybrid vehicles can even run on three fuels, i.e., LPG or petrol combined with an electric motor³⁹.



For more information,
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¹ European Commission, Transport emissions. Available at: https://climate.ec.europa.eu/eu-action/transport-emissions_en. | ² European Commission. (2020). Sustainable and Smart Mobility Strategy – putting European transport on track for the future. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020SC0331>. | ³ European Commission. (2022). Commission proposes new Euro 7 standards to reduce pollutant emissions from vehicles and improve air quality. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_6495 | ⁴ ACEA. (2023). Vehicles in use, Europe 2023. Page 15. Available at : <https://www.acea.auto/publication/report-vehicles-in-use-europe-2023/> | ⁵ ISPRA. (2022). La banca dati dei fattori di emissione medi per il parco circolante in Italia. Available at: <https://fetransp.isprambiente.it/#/> (Comparisons are made referring to FE2019, comparing emission factors of medium segment) | ⁶ Argus Media. (2022). 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BioLPG: A Renewable Pathway Towards 2050 . Available at: <https://mailchi.mp/51d4353b7873/downloadstudy-biolpg2050>. | ¹⁵ GPLAutogas.info (2023). www.glpautogas.info - all about renewable carburants. Available at: <https://www.glpautogas.info/index.html> | ¹⁶ CO2 Neutral Fuel means a renewable and/or synthetic fuel as defined by Directive 2018/2001 including biofuel, biogas, biomass fuel, Renewable liquid and gaseous transport Fuel of Non Biological Origin – RFNBO or Recycled Carbon Fuel – RCF. | ¹⁷ European Commission (2022b). Fuel price comparison | European Alternative Fuels Observatory. Available at: <https://alternative-fuels-observatory.ec.europa.eu/consumer-portal/fuel-price-comparison>. | ¹⁸ European Commission (2023). Weekly Oil Bulletin. Available at: https://energy.ec.europa.eu/data-and-analysis/weekly-oil-bulletin_en. (Data refers to the weighted average from the Price Development 2005 onwards dataset). | ¹⁹ European Commission (2023). Weekly Oil Bulletin. 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