

RENEWABLE GASES

A key asset for energy independence, security of supply, and decarbonisation

Renewable gas solutions

Renewable hydrogen: gas obtained through the electrolysis of water using renewable electricity

Biomethane: methane produced from biomass through the upgrade of biogas. It has properties close to natural gas. When used in transport we refer to BioCNG and BioLNG, if liquified

BioLNG: a biofuel made by processing organic waste flows, such as organic household and industrial waste, manure, and sewage sludge

Biogas: gas that is produced from the decomposition of organic materials, including waste and residues

BioLPG: also known as renewable LPG, is a renewable liquid gas obtained from various processes using biological sources or renewable electricity and CO₂

Technologies & processes



Anaerobic digestion



Upgrading of biogas



Gasification



Biomass pyrolysis



Power-to-gas



Biorefining

End uses & benefits

Renewable and low carbon gases are a cost-effective solution to the decarbonisation of **heating** off and on the grid*



Increasing the uptake of renewable hydrogen and biomethane is a cost-efficient path to achieve EU's ambition to **reduce imports** of natural gas from Russia

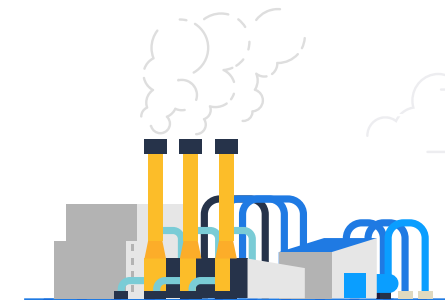


Renewable gases can keep and create **jobs** in Europe

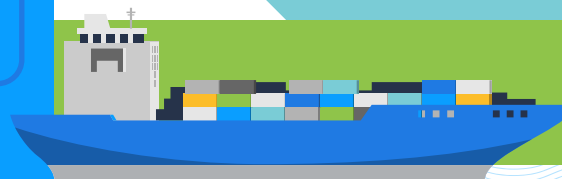
Biogas production and conversion drives decarbonisation and economic development of the **agricultural sector**, reducing methane emissions and boosting the transition towards a more **circular economy**



Switching to renewable gases accelerates **energy system integration** and contributes to the decarbonisation of **industry** and **electricity production**



Renewable gases are a strong accelerator of carbon neutral **mobility**



Did You Know?

Beyond renewable gases, low carbon gases are another solution to help achieve climate neutrality. To know more about their benefits [check here!](#)



Policy recommendations

The gas industry is supportive, committed, and prepared to proactively deliver on the REPowerEU Plan and its ambition to increase the EU's energy independence alongside the implementation of the Green Deal objectives, to ensure a secure and just energy transition towards climate neutrality.

A key dimension of REPowerEU to reach EU energy independence is the deployment of more renewable gases. To implement this objective, we call on EU policymakers to:

- **Acknowledge** the potential of all types of renewable and low-carbon gases in creating a more resilient energy mix and ensuring security of supply.
- **Ramp-up** the domestic production of renewable gases.
- **Align** the sub-targets for renewable fuels of non-biological origin for industry and transport in the revision of the Renewable Energy Directive (RED II) review with REPowerEU targets.
- **Speed-up and scale-up** renewable gases in power generation, industry, buildings, and transport.
- **Support** investments in energy systems such as retrofitting and repurposing of existing infrastructure to accommodate renewable and low-carbon gases.
- **Accelerate** efforts to deploy infrastructure for producing, importing, and transporting hydrogen.
- **Ensure** cost-efficient and secure energy supplies to EU consumers through deployment of renewable gases in the EU market and renewable liquid gases, such as bioLPG and bioLNG, in off-gas-grid rural areas.
- **Develop** a credible and robust Guarantees of Origins system to value lifecycle GHG intensity reduction of renewable and low-carbon gases.

