



GAS FOR CLIMATE

A path to 2050

Action Plan 2030 (update 2019)

How gas can help to achieve the Paris Agreement target in an affordable way



Gas for Climate: how to scale up renewable methane, green and blue hydrogen

The Paris Agreement goal to limit global temperature increase to well below two degrees requires deep decarbonisation. This can only be achieved through long-term energy system planning starting today and shared determination of all involved in the energy system. Gas for Climate is committed to achieve a net zero emissions EU energy system by 2050 and is convinced that this can be achieved by a smart combination of renewable electricity and renewable gas. This document outlines which actions are required to achieve this goal.

This Action Plan is an update of a previous version published in September 2018. It follows a recent study by Navigant that analysed the future role of renewable gas in the EU energy system.

This study found that a smart combination of hydrogen and biomethane with electricity is the optimal way to decarbonise the energy system, with all energy ultimately becoming renewable. Navigant concluded that using around 2900 TWh of renewable methane and green hydrogen (approximately 270 billion cubic metres of natural gas equivalent) through existing gas infrastructure across the EU saves society €217 billion annually by 2050 compared to an energy system using a minimal amount of gas. The Navigant scenario shows that a fully renewable energy system by 2050 is possible, with all energy being produced within the EU. However, it can be expected that energy import and a certain quantity of blue hydrogen is still needed by 2050.

We support the transition to a fully renewable energy system. Gas and gas infrastructure are indispensable to achieve this, and blue hydrogen can accelerate decarbonisation efforts in coming decades.

With the potential and the value of renewable gas and gas infrastructure mapped out, the next step would be to scale up renewable and low carbon gas. To achieve a net zero carbon EU energy system by 2050 in a cost-effective way we believe that biomethane, green and blue hydrogen production within the EU needs to scale up. This requires action by many different stakeholders, starting today. Gas for Climate members, both biomethane producers (European Biogas Association and Consorzio Italiano Biogas) and Transmission System Operators (TSOs, Enagas, Fluxys, Gasunie, GRTgaz, Open Grid Europe, Snam and Teréga), are committed to support decarbonisation by facilitating a scale up of production and ensuring the infrastructure to store and transport renewable and low carbon gas is ready. Gas for Climate also sees the need for an improvement of renewable methane and hydrogen business cases with lower production costs. Gas for Climate consortium members already act upon this by promising demonstration projects on green and blue hydrogen and by scaling up biomethane production across Europe. Policy support and an enabling regulatory framework are important for the scale-up of renewable and low carbon gas. The new Commission may decide to propose an update of existing gas market regulation and/or may decide to design a

comprehensive strategy for a competitive decarbonised EU industry. Decarbonising the European industry while strengthening Europe's industrial competitiveness by becoming a world-leader in sustainable industry is a focus of the European Commission¹. This action plan includes elements that could be considered in developing these policies.

This Action Plan describes what Gas for Climate member organisations are already doing to facilitate the scaling up of renewable and decarbonised gases, what their ambitions related to renewable gas are out to 2030 and what is needed to enable action. Compared to our previous Action Plan (published fall 2018), the Action Plan was extended by the inclusion of blue hydrogen as one of the options and three new actions were added regarding: Implementation of (temporary) support measures for CCS to enable blue hydrogen as transition option, Issue concessions for large-scale Power2Gas projects on EU-level, and Increase of regulatory flexibility for investments to enable the transport and trade of renewable methane and hydrogen. Existing actions have been reviewed and changed or deleted if appropriate. Lastly, the list of projects in which Gas for Climate members are active has been updated and extended.

¹ COM (2017) 479 - Investing in a smart, innovative and sustainable Industry - A renewed EU Industrial Policy Strategy

Unlocking the potential of renewable and low carbon gas in Europe

Renewable and low carbon gases have a valuable role to play in a future decarbonised EU energy system. These gases include biomethane, green hydrogen, power to methane and blue hydrogen based on natural gas combined with Carbon Capture and Storage (CCS). All of these gases can be stored, transported and distributed using the existing gas infrastructure for an integrative sector coupling approach.

The March 2019 Gas for Climate study focused on biomethane, power to methane, green and blue hydrogen used throughout the future energy system in an optimal combination with renewable electricity. This Action Plan covers all these future gas types.

Biomethane is renewable methane gas produced from biomass. Gas for Climate advocates the use of sustainable biomass leading to positive externalities rather than negative sustainability impacts.

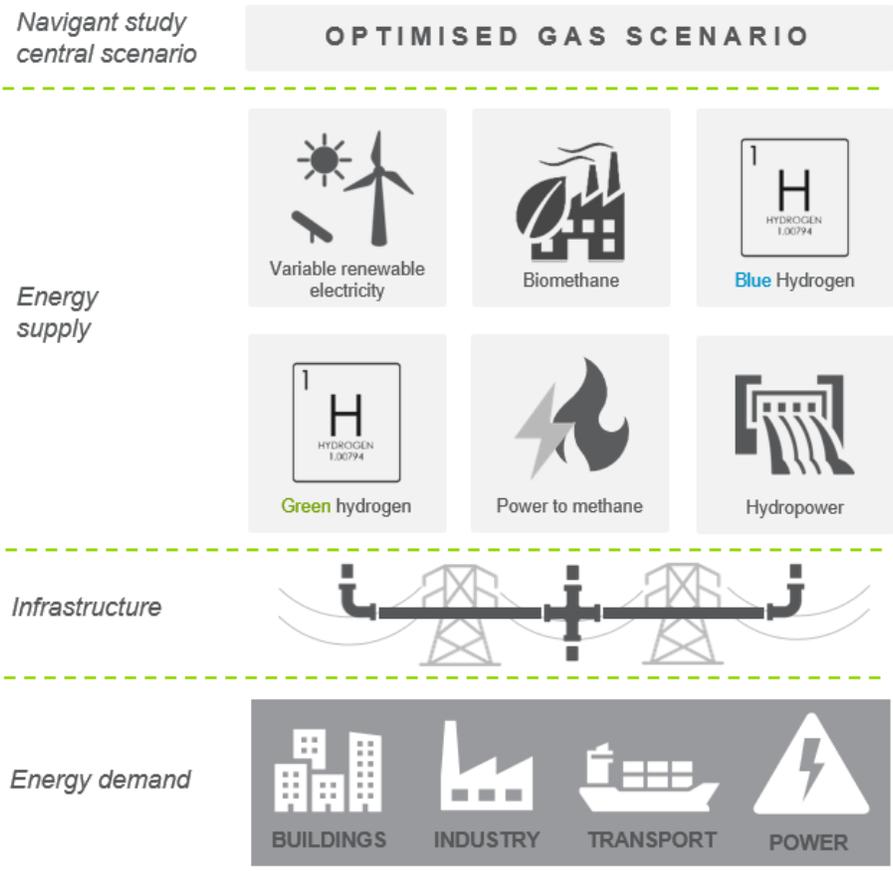
Green hydrogen is renewable hydrogen gas produced from renewable electricity.

Power to methane, also called synthetic methane, is methane gas produced from hydrogen and carbon dioxide.

Blue hydrogen is low carbon hydrogen gas produced for example from natural gas with pre-combustion Carbon Capture technology

Scope of this Action plan: *The focus of this Action Plan is on biomethane, power to methane, green and blue hydrogen used for electricity production, building heating, transport and heat & feedstock for industry.*

Achieving a net zero emissions EU energy system by 2050 based predominantly on renewables



Scaling up renewable methane and hydrogen is happening today

To achieve a net zero carbon EU energy system by 2050 in a cost-effective way we believe that renewable methane and hydrogen production within the EU needs to scale up. Action today is required to make this vision a reality. The Gas for Climate consortium members are already undertaking various actions to make this vision a reality.

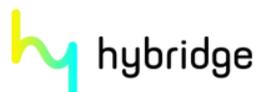
HYOFFWIND

Hyoffwind in Belgium is one of the first power-to-gas projects of industrial-scale. **Fluxys** is one of the partners in the project. Even though the project is in feasibility phase, the aim is to build a power-to-gas installation that can convert several megawatts of electricity into green hydrogen that can be marketed as carbon-free fuel, feedstock or injected directly into the Belgian gas network.



Green Deal

The **Green deal** between the Dutch government and seven stakeholders, including **Gasunie**, paves the way to the realization of hydrogen exchange within the Smart Delta Resources platform. Stakeholders are planning to exchange hydrogen for industrial applications via the national gas transport network of Gasunie Transport Services. The underground transportation network provides a sustainable, efficient and safe method to transport hydrogen. This Green Deal shows that the national gas transport network can contribute to making the industry in the Delta region more sustainable.



OGE and **Amprion** have joint forces to develop the power-to-gas project **Hybridge** at an industrial scale of 100MW. The project will be located in the region around Lingen in North Western Germany. The purpose of Hybridge is the smart integration of power and gas grids on the highest system level. It will offer the required option for system integration by transport and storage of renewable energy also via gas infrastructure. Today's largest power-to-gas plant in Germany has a maximum installed capacity of around 6MW.

Power to Green Hydrogen Mallorca

The project, in which **Enagás** is participating, involves the development of a green hydrogen generation plant from renewable energy to supply a fleet of public transport buses. This project is part of a public-private initiative that aims to promote the development of new clean energy in the Balearic Islands and to boost the economy of the region.



ELEMENTEINS
ENERGIEWENDE MIT
SEKTORKOPPLUNG

Gasunie Germany, **TenneT** and partners are planning to build a 100 MW power-to-gas pilot plant in Germany to convert green electricity into renewable gas. The plant will be located near the transformer stations where offshore wind power from the North Sea is collected. The project aim is identifying opportunities for sector coupling between energy, industry and transportation by exploring the potential of renewable gas for energy storage, renewable gas delivery to the Ruhr area (using existing gas pipelines) or as a transportation fuel. The plant is planned to come online in 2022.



Jupiter 1000 (France), a 1MWe power-to-gas project, is the first industrial demonstration of an electrolysis and methanation process using captured CO₂. Green hydrogen will be produced using two electrolyzers involving different technologies, from 100% renewable energy. **GRTgaz** is the project manager and **Teréga** a partner.



Italian farmers and biogas producers united in the **Consorzio Italiano Biogas** developed an innovative approach to produce sustainable biogas from winter crops. This **Biogasdoneright** concept increases the agricultural productivity of existing farmland without negative environmental impacts and no direct or indirect land use change effects. Biogasdoneright leads to co-benefits such as decreased soil erosion risk, increased on-farm biodiversity and a potential increase of soil carbon content by leaving more agricultural residues on the land. It is likely to result in negative carbon emissions.



Snam has acquired 70% of IES Biogas, a leading Italian company in the design, construction and management of biogas and biomethane production plants in order to boost the development of biomethane production



The **RenovaGas** pilot in Spain developed a power-to-gas facility using renewable energy and methanation with CO₂ from Biogas. The produced gas is totally renewable and high quality, enabling it to be injected directly into the Spanish gas network. Enagás was one of the partners in the project.

HYREADY

The Europe-wide **HYREADY** project aims to test the injection of various percentages (2, 5, 10, 20 and 30%) of hydrogen on gas transport and distribution networks. It also aims to provide engineering guidelines for gas TSOs and DSOs to support them in preparing their networks to be able to transport a mix of methane with hydrogen. **GRTgaz, Enagás, SNAM** and **Teréga** from the GfC consortium are all involved in the project.

Supercritical Water Gasification (SCW)

The **SCW** project in the Netherlands uses supercritical water gasification to convert wet biomass into sustainable energy and reusable raw materials. This multi-feedstock technology can process multiple types of biomass. Additionally, the gas is produced at high pressure negating the high costs of compression. **Gasunie** is part of the team building this project.



FenHYx is a project initiated by an international partnership including **GRTgaz**. The project aims to support the adaptation of hydrogen in the European gas network and the emergence of the hydrogen sector by defining technical, economic and regulatory conditions for injecting hydrogen into high pressure gas infrastructure. Using an industrial platform located in **France**, FenHYx reproduces all components of a high pressure gas network: testing industrial equipment, performing trials at varying pressures and concentrations for both hydrogen and methane, assessing and certifying innovative processes for hydrogen transport and facilitating innovations in equipment.

Hydrogen potential in Germany

The German gas TSOs, including **OGE**, have started the first market inquiry process for hydrogen potential in Germany. The aim is an early integration of hydrogen in the NDP Gas 2020 to stimulate sector coupling in network development planning. It is expected that the NDP process will stimulate the integration of renewable gas – including renewable hydrogen – in the German pipeline network.

What Gas for Climate members want to achieve by 2030

Increasing renewable methane, green and blue hydrogen in Europe to about 2900 TWh or 270 billion cubic metres by 2050 requires action today. Gas for Climate members, which includes biomethane producers and TSOs, are committed to support decarbonisation by facilitating and enabling the scale up of production and providing the infrastructure to store and transport renewable methane and hydrogen (blue and green) is ready. There's a significant task to improve the business case for renewable methane and hydrogen on production and transportation. The overview below shows the specific 2030 ambitions for each Gas for Climate member organisation. According to the ENTSOG Ten Year Network Development plan (2018), the amount of renewable gas in Europe can reach a quantity of 255 TWh (~25 bcm) by 2030 in the six EU Member States in which Gas for Climate consortium members are based (Belgium, France, Germany, Italy, Netherlands and Spain)². As a consortium we are committed to support the achievement of that goal.

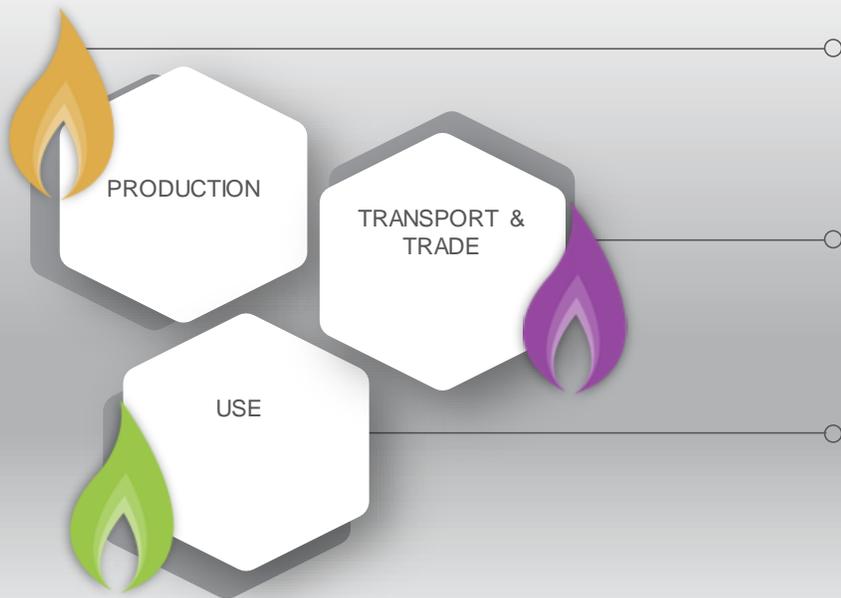
The overview below shows the 2030 ambitions for each Gas for Climate member organisation.



² This number is based represent the most ambitious renewable gas forecast as included in the ENTSOG Ten Year Network Development plan scenario's

How to get to 2900 TWh renewable methane and hydrogen

The market for renewable gas is currently driven by the efforts of first movers. It is possible to scale this up to about 2900 TWh or 270 bcm by 2050, possibly including some blue hydrogen, within the context of achieving a fully decarbonised EU energy system at the lowest possible costs. Such scale-up requires actions throughout the full gas value chain. Necessary actions are described below, being grouped in actions focusing on the production, transport & trade and use of renewable methane and hydrogen.



Production – increase of renewable methane and hydrogen production requires improved business cases, scale-up of the market, increased societal acceptance of sustainable renewable gas and further development of technologies.

Transport & trade – transport of renewable gas needs to be tested to become ‘common practice’. Also, preconditions are needed to enable the trade in renewable gases across EU Member States borders. Regulation plays a key role in enabling transport and trade of renewable gas. A European Register for Green gas, among others, will be required to ensure flourishing renewable gas cross-border trade.

Use – renewable methane and hydrogen delivers significant value to society, especially in the heating of existing buildings and production of electricity at times of peak demand. Gas is also needed for some industrial (high temperature and feedstock) processes than cannot be replaced by electricity for physical or economic reasons. Renewable gas can also be used to decarbonise (heavy) transport.



Increased production of renewable methane and hydrogen is needed to reach our 2050 vision. This requires an improvement of the business case, scale-up of the market, increased societal acceptance of renewable gas, further development of technologies.

Part of these needs can be covered by companies. Gas for Climate member organisations are already facilitating production by implementing pilot projects and are committed to further facilitating the scaling up of production. Biomethane producers are committed to reducing production costs and steering biomethane production towards using the most sustainable types of biomass. One example is the Biogasdoneright concept, which is an innovative approach to produce sustainable biogas from cover crops without increasing the use of synthetic fertilizers, using strip tillage and feeding soil nutrients back to the field by precision-fertilization of biogas digestate. Biogasdoneright increases the agricultural productivity of existing farmland without negative environmental impacts and no direct or indirect land use change effects. It has proven positive impacts on soil quality and reduced use of chemical fertilizer. It can also generate negative carbon emissions through increased organic carbon in soils.

However, a successful scale-up of renewable gas production also requires policy support, such as the introduction of a 10% target for renewable gas by 2030.

Requirements for ramping up renewable gas production, and how companies (TSOs, producers, equipment suppliers) and policy makers can contribute.

DEVELOP TECHNOLOGIES



Improve gasification technologies

Improve conversion efficiencies of biomass to biomethane, electricity to hydrogen and hydrogen to methane

IMPROVE THE RENEWABLE GAS BUSINESS CASE



Support scheme

Fair taxation

Reduce production costs

SCALE-UP THE MARKET



Mandatory target in 2030 (10%) for renewable gas final consumption

Enable TSO to facilitate upscaling production

Improve access to finance

INCREASE SOCIETAL ACCEPTANCE OF SUSTAINABLE BIOMETHANE



Increase research on biogas done right

Open dialogue with NGOs

Needed from companies

Needed from policymakers

What companies can do to increase supply of renewable methane and hydrogen

| WHAT | WHO | WHEN |
|---|---|------------|
| Biomethane producers involved in Gas for Climate are committed to significantly reduce biomethane production costs. A cost reduction of at least 20% in 2030 compared to 2018 biomethane production cost levels should be feasible. | Biomethane producers, technology providers | 2018-2030 |
| Electrolysis system costs to produce hydrogen from electricity are expensive today. It is possible to significantly reduce costs by increasing the efficiency of electrolysis and decreasing financing costs by de-risking strategies. | Technology providers | 2018-2030 |
| Improve gasification technologies including enabling feedstock flexibility (quality, consistency, dryness) and post-production gas treatment (particulate and tar removal, enrichment for grid injection). | Technology providers, renewable gas producers | 2018-2030 |
| Improve conversion efficiencies of biomass to biomethane, electricity to hydrogen and hydrogen to methane | Technology providers, renewable gas producers | Up to 2025 |
| Increase research on biogas done right. Biogasdone right not only holds the promise of scaling up sustainable biomethane production, the concept can also generate additional benefits such as increased rural employment, security of energy supply and more sustainable agricultural production. Today, Biogasdone right is mainly applied in Italy and tested in France. For the concept to be rolled-out throughout the EU, cultivation trials are needed in various Member States. Farmers and biogas producers can take the lead, assisted by agricultural institutes and universities. | Farmers, biomethane producers, agricultural institutes and universities | Up to 2025 |

How policy can help to boost markets for renewable methane and hydrogen

| WHAT | WHO | WHEN | HOW |
|--|--------------------------------------|------------|---|
| Introduce a mandatory target with at least 10% renewable gas final consumption by 2030, with specific national targets to be decided upon based on the national availability of agricultural and forestry biomass. Achieving the target will count towards the 32% target for renewable energy as laid down in the REDII directive. | EU | 2018-2022 | <ul style="list-style-type: none"> To be included in the upcoming EU gas market update |
| CAPEX support for innovative renewable gas production technologies | EU | 2018-2022 | <ul style="list-style-type: none"> Support schemes made available also for projects with relatively limited capital expenditure Finance gasification plants from the EU Innovation Fund Support for innovative gasification demonstration and CO₂ infrastructure projects from Horizon Europe |
| Introduce (temporary) support for CCS to enable blue hydrogen as transition option] | National policy with EU coordination | Up to 2030 | <ul style="list-style-type: none"> Make the implementation of a CO₂ infrastructure a European priority Creation of regulatory scheme for CO₂ infrastructure that is similar to the gas infrastructure scheme <ul style="list-style-type: none"> Include gas infrastructure operators in the process and discuss their role and involvement Implement policy at the national level, supported by EU |

| | | | |
|---|--------------------------------------|------------|---|
| Recognise the roles which TSOs can play to facilitate and scale up infrastructure investments | EU | 2018-2022 | <ul style="list-style-type: none"> The EC should clarify the role that TSOs can play to support the development of renewable gas conversion infrastructure. |
| Fair support for renewable gas. Ensure that the benefits of renewable gas as dispatchable renewable energy are considered in national incentive schemes in a harmonised way | National policy with EU coordination | up to 2025 | <ul style="list-style-type: none"> Introduce EU harmonised rules for auctioning renewable energy subsidies Modify the calculation of tariff-based support for renewables to focus not just on lowest possible production costs but to also consider the highest possible benefit to the overall energy system Enable grid connection and tariff discounts for green gas injections into the transmission network |
| Issue concessions for large-scale Power2Gas projects on EU-level. By advocating the importance of large-scale Power2Gas projects and the need for concessions that include permitting and infrastructural needs, the EU can give guidance in project risks reduction. | National policy with EU coordination | up to 2030 | <ul style="list-style-type: none"> Create Projects of Common Interest at EU-level for conversion to hydrogen (as storage for renewable energy, to lower the energy system costs) and realisation of transportation infrastructure. All permits and infrastructural needs will be addressed by national governments, lowering project risks from project developers. Costs for permitting and infrastructure should be made transparent |
| Fair taxation 1. Avoid double taxation of green hydrogen. Today, energy tax is charged over electricity, also when used to produce hydrogen. Hydrogen as a product is yet again charged with energy tax 2. Differentiate energy tax on biomethane from natural gas | National policy with EU coordination | 2025-2030 | <ul style="list-style-type: none"> National energy tax law, to open the possibilities for rebates/exemptions to produce green hydrogen and biomethane |
| Use the EU carbon farming initiative to support Biogasdoneright implementation | EU | 2018-2020 | <ul style="list-style-type: none"> The Common Agricultural Policy should recognise Biogasdoneright under the new result-based policy design rewarding farmers directly for tonnes of CO2 removed from the atmosphere by cultivating biomethane feedstock in addition to food crops (Carbon Farming) |

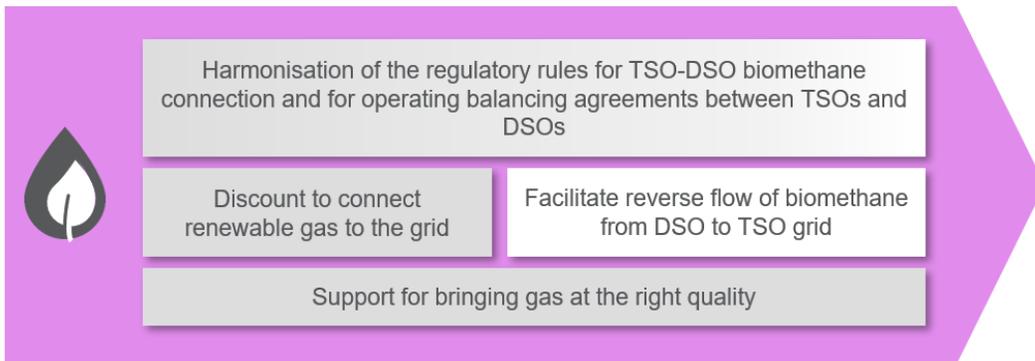


Renewable methane and hydrogen need to be transported, stored and traded. Gas for Climate sees a clear need for improved grid access for renewable gas, improved cross border trade of all forms of renewable and decarbonised gas and facilitated transport of hydrogen and the coupling and integration of gas and electricity sectors.

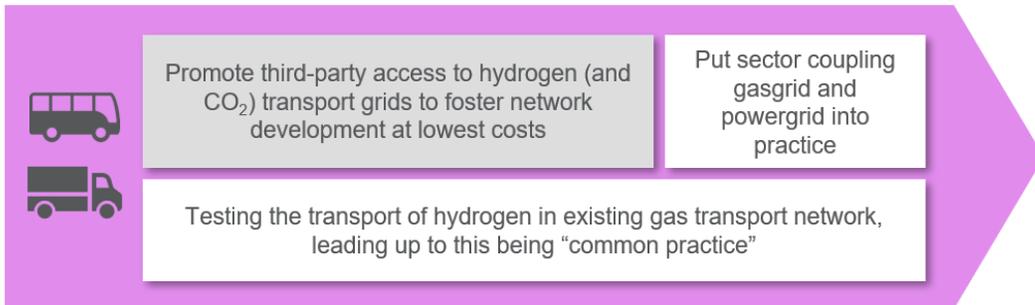
Part of the required actions to achieve a well organised transport and trade of renewable gases are to be taken by companies. Gas for Climate member organisations have already set up pilot projects to test and improve the transport and trade of renewable gas. However, a successful scale-up of renewable gas transport and trade also requires policy support.

Requirements to enable transport and trade of renewable gas, and how companies (TSOs, producers, equipment suppliers) and policy makers can contribute.

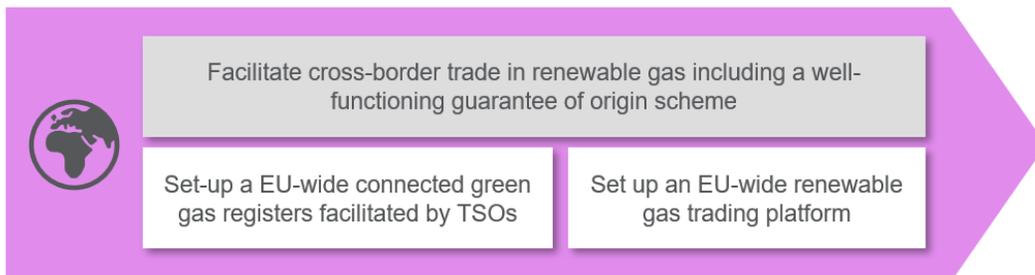
IMPROVE GRID ACCESS FOR RENEWABLE GAS



FACILITATE TRANSPORT OF HYDROGEN



IMPROVE CROSS BORDER TRADE



Needed from companies

Needed from policymakers

How companies can enable transport and trade of renewable methane and hydrogen

| WHAT | WHO | WHEN |
|--|-----------------------|------------|
| Testing the transport of hydrogen in existing gas transport networks, leading up to this being 'common practice' | TSOs | 2018-2022 |
| Enabling 'reverse flow' injection of renewable gas in existing gas transport networks. Regular communication on (new) renewable gas capacity coming online | DSOs/TSOs | 2018-2022 |
| Harmonisation of the national registers and setting up an EU-wide connected green gas register facilitated by TSOs to enable cross-border trade. | TSOs, other companies | 2018-2022 |
| Set up an EU-wide harmonised renewable gas trading platform | Companies | up to 2025 |
| Investors including gas grid operators to set up hydrogen and power to methane pilot projects | TSOs, other companies | Up to 2025 |

How policy can facilitate transport and trade of renewable methane and hydrogen

| WHAT | WHO | WHEN | HOW |
|--|----------------------|-----------|--|
| Harmonisation of the rules and guidelines for TSO-DSO renewable gas connection and in governing balancing agreements between TSO and DSOs | EU | 2019-2022 | Upcoming EU gas market update <ul style="list-style-type: none"> injection in DSO grid should be counted as gas made available at a virtual trading point (at TSO level) to improve renewable gas tradability DSO and TSO technical guidelines and gas quality specifications should be harmonised. |
| Promote Third Party Access to hydrogen and CO ₂ transport grids to unlock and foster the development of CCU/S and hydrogen across Europe | EU | 2019-2022 | Upcoming EU gas market update |
| Facilitate cross-border trade of renewable gas including a well-functioning guarantee of origin scheme | EC and Member States | 2019-2022 | EC recognition of renewable gas certificate trading schemes to enable proof of origin and proof of sustainability by an EU harmonised certification scheme. Upcoming EU gas market update |
| Recognise the role of the gas transport infrastructure in terms of capacity and flexibility it provides for the energy system, in particular for the integration of renewable sources | EC | 2019-2022 | To be included in the upcoming EU gas market update To develop an energy-wide tariff scheme reflecting the contribution of the gas system flexibility to the balancing and resilience of the European energy system |
| Increase the coupling and integration between the gas and electricity. This includes the linking of gas and electricity systems to facilitate a greater share of variable renewable energy in the energy system while allowing dispatchable energy to provide flexibility in all three sectors in the most efficient way. Furthermore, it includes interlinkages between the electricity, heating and transport sectors through infrastructure and energy carriers. | EU | 2019-2030 | Foster interlinked Network Development Plans by the gas and electricity sectors European legislation should value the synergies between sectors (e.g. taking into account positive externalities for the agricultural sector of green gas project through the CBA for PCI) Enabling the conversion of green gas and green electricity certificates through P2G and G2P Increase also the operational exchange between gas and electricity infrastructures |
| Increase regulatory flexibility for investments to enable the transport and trade of renewable methane and hydrogen. | Regulator | 2019-2022 | The upcoming EU gas market update should be used to broaden the mandate of national regulatory authorities towards the delivery of energy transition pathways. Regulators rightly urge TSOs to be cost-efficient while at the same time integrating renewable gas can increase costs. A balance is needed between required prudence and the expected ambition from TSOs to contribute to the energy transition. |

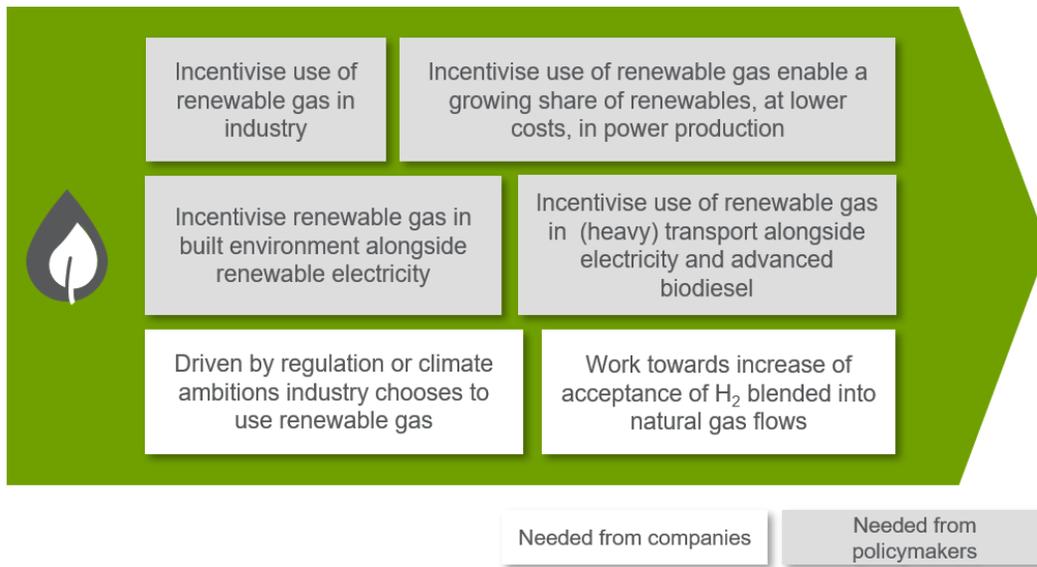


Various energy-using sectors can stimulate demand for renewable methane and hydrogen. Companies will decide to use renewable gas driven by climate ambitions or by regulation in which they are (financially) incentivised to use renewable gas.

The EU legislation on Ecodesign and energy labelling are for instance stimulating increased efficiency in heating and cooling equipment. By supporting industrial competitiveness & innovation and promoting the better environmental performance of products throughout the internal market, the use of renewable gas can be stimulated.

Requirements to ramp up renewable methane and hydrogen use, and how companies (TSOs, producers, equipment suppliers) and policy makers can contribute to achieving the 2030 decarbonisation goals (see also “What Gas for Climate members want to achieve by 2030”).

INCREASE THE USE OF RENEWABLE GAS



What companies can do to increase the use of renewable methane and hydrogen

| WHAT | WHO | WHEN | HOW |
|---|--------------------------------|------------|--|
| Industry makes a conscious choice to use renewable gas. We see ever more companies taking responsibility in the fight against climate change. Over 400 large international companies have pledged to reduce their company-emissions in line with required reductions to meet the Paris Agreement target. Within the EU, the more stringent EU ETS after 2020 is likely to trigger increased investments in low carbon production technologies and industrial energy efficiency. | Companies | Up to 2030 | <ul style="list-style-type: none"> EU ETS-installations opting to use renewable gas for process heat Companies setting science-based climate targets |
| Work towards increase of acceptance of hydrogen blended into natural gas flows | TSOs, DSOs, hydrogen producers | Up to 2025 | |

How policy can help to increase the use of renewable gas

| WHAT | WHO | WHEN | HOW |
|---|-----|-----------|--|
| <p>Support the use of renewable gas in transport to help to decarbonise of the transport sector. Currently, gas does not play a large role in transport. A fully decarbonised transport system requires large quantities of renewable or low carbon fuels. Electric mobility will dominate light road transport, yet in addition bio-LNG and hydrogen are needed in shipping and truck transport. Aviation fuels will be decarbonised by sustainable biofuel and synthetic kerosene based on hydrogen. Stimulating vehicle fuel efficiency should go hand in hand with a faster increase in the share of renewables in transport. Also, consumer access to electric vehicles as well as vehicles that run on renewable gas should be improved.</p> | EU | 2019-2030 | <p>EU Clean Mobility Package II and Clean Mobility Package III</p> <ul style="list-style-type: none"> • Incentivising vehicle manufactures to supply more vehicles running on (bio)methane by introduction of a full life-cycle assessment CO₂ methodology vs. existing tailpipe approach. • Introduction of a CO₂ correction factor (CCF) in the EU regulations for CO₂ standards for light duty vehicles and heavy-duty vehicles. The CCF ensures that CO₂ savings from using renewable gas are taken into account when assessing carbon benefits of vehicles. <p>Recognise (in RED II, Annex IX) cover cropping as an advanced form of biogas/biofuel feedstock production, not leading to unwanted land use impacts.</p> |
| <p>In the built environment, assume a strict technical neutrality in incentivising the use of renewables and in promoting efficient heating and cooling products that have better environmental performance</p> | EU | 2025-2030 | <p>Evaluation of the Energy Efficiency Directive and monitoring of the impact on the related regulations such as those on Ecodesign and energy labelling</p> |
| <p>Support the design of a market system which enables the discovery of the societal costs and benefits of all renewables (incl. those associated with intermittency)</p> | EU | 2018-2020 | <p>Evaluation of Directive and Regulation of Internal Electricity Market (recast).</p> <p>Commission original proposal appear to be more “market oriented” than other</p> |

A large scale-up of renewable methane and hydrogen in Europe is possible yet requires going beyond 'business as usual'. Companies must step up efforts to improve renewable gas business cases, facilitate its trade and transport and be willing to start using it to produce heat, power and fuel. Policy makers can use the upcoming EU gas market update to support the transition towards renewable gas.

The Gas for Climate consortium hopes that this Action Plan will contribute to the development of renewable gas as a valuable element in the net-zero emission and ultimately fully renewable future European energy system. We welcome your feedback and look forward to further discussion and collaboration with companies and policy makers. Please contact us via our website www.gasforclimate.org or via info@gasforclimate.org.



gasumte



TEREGA

FLUXYS 



Open Grid Europe
The Gas Wheel

