Technology Collaboration Programme by iea

IEA Bioenergy Task 37

Newsletter IEA Bioenergy Task 37: 10/2020

Biomethane in Europe

Scaling up renewable gas production in Europe could create 600,000 jobs by 2050

A new analysis of the Commission prepared by Navigant, shows that scaling up renewable gases in the EU can create 1.7 million to 2.4 million jobs by 2050, of which 600,000 to 850,000 would be direct jobs. Full decarbonization of the EU gas sector is expected to be an important contribution to the goals of the EU Green Deal and the upcoming decarbonization package. According to the analysis, this renewable energy system will have significant benefits in creating employment opportunities, especially in rural areas where employment opportunities are often scarce. Most of these jobs are stable European jobs that cannot be outsourced.
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Potentials of sector coupling for decarbonization: linking gas and electricity

Frontier Economics together with CE Delft and THEMA were mandated by the European Commission to carry out a study on the integration of the EU gas and electricity sectors both in terms of their markets and infrastructure. One key driver of sector coupling, and the deployment of renewable and low-carbon gases more generally (including biogas and biomethane), is the potential cost saving to be realized from their use in a decarbonized energy system. The case for renewable and low-carbon gases arises from the fact that they could be transported and stored at lower cost than electricity, by making use of existing storage and transport infrastructure. Their use may also avoid potentially costly and disruptive changes to end-use appliances. The use of natural gas may potentially increase in the transition to replace more polluting fuels (i.e. to 2030) but should eventually largely be phased out by 2050. However, different renewable and low-carbon gases (for example biomethane, hydrogen and synthetic methane) could all play a role in the future. As a result, the focus of infrastructure regulation will need to shift from natural gas to a variety of different (low-carbon and renewable) gases.
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Mapping the state of play of renewable gases in Europe

The study, as part of the Horizon 2020 project REGATRACE, shows that the countries with the biggest production of biomethane are Germany (10,018 GWh in 2018), United Kingdom (3,300 GWh in 2018), the Netherlands (2,226 GWh in 2018), Denmark (1,425 GWh in 2017), Sweden (1,281 GWh in 2018) and France (1,207 GWh). The production and consumption of biomethane is well-balanced in most Member States, while Denmark and Germany produce more biomethane than they consume, and the excess of production is exported or stored. In Sweden, the consumption of biomethane doubles its production. This can be explained because Swedish incentives are focused on the consumption side, whereas most Member states tend to subsidize the production or injection of biomethane. The value and duration of operational support for biomethane differs largely between the different countries and regions. When it comes to the type of support, 65 % of renewable gas producers have a preference for the application of Feed-in Tariffs. In Sweden and Italy, the main end-use application is transport, whereas in the United Kingdom is heating & cooling. Most of Sweden's biomethane is used in the transport sector due to a

favourable support system. In Italy, the use of biomethane in the transport sector is facilitated by the already existing infrastructure and methane vehicles fleet. The cross-border trade of biomethane is still limited due to missing European harmonization.
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Biomethane Observatory - Benchmark of European industries

The Biomethane Observatory is the 1st independent observatory dedicated to the biomethane industry across France and Europe. Their latest publication, dated December 2019, lists the figures related to the biomethane sector in Europe as of end of 2018 and provides a graphic overview of the sector.
More (in French)

Germany extended road toll exemption for gas HDV

The German government accepted a resolution of the Transport Committee extending the exemption from motorway tolls for liquefied natural gas (LNG/LBG) and compressed natural gas (CNG/CBG) trucks until December 31, 2023. The toll exemption for trucks running on natural gas was introduced in Germany in early 2019 for a period of two years. In Germany, this exemption is added to a national plan to help buy units. Created at the end of 2018, it offers a subsidy of up to 12,000 euros per truck. “Since the entry into force of these instruments, 1,421 applications for LNG trucks and more than 430 for CNG vehicles have been registered,” the Dena report details. “Currently, CNG and, in particular, LNG trucks are the only alternatives to diesel in heavy long-distance transport,” underlines the note that recalls the advantages of gas in terms of greenhouse gases.
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17% renewable gas used by the mobility sector in Europe

NGVA Europe released extensive numbers about the current utilization of biomethane in the road transport sector in Europe. These numbers illustrate that renewable gas is already broadly available for consumers all across Europe. Today, sustainable production pathways based. The renewable gas is distributed thanks to a constantly growing refueling infrastructure. In detail, out of todays 4.120 CNG and LNG fueling stations, more than 25% are delivering biomethane to European consumers. This equals a 17% average of all gas used as transport fuel (2.4 bcm/23.4 TWh). This translates in an impressive effect on the CO2 emissions footprint: compared with gasoline, the available 17% biomethane share boosts the CO2 emissions reduction from 20% (obtained with natural gas), up to almost 40%. Current natural gas infrastructure and vehicles are fully compatible with renewable gas and therefore are potent enabler of a carbon-free mobility. Even in the heavy-duty long-haul sector, bioLNG is a growing reality, thus supporting in a very cost-effective way the transition towards carbon neutral mobility. Today, it is the best solution to boost the decarbonization process of the transport sector leveraging on a real circular economy. And while continuously increasing the rate of renewable gas in our network, there is future potential also in improving the efficiency of natural gas engines. This will progress hand in hand. Apart from Sweden who’s biomethane share in transport gas is far beyond 80% also UK’s Gas Vehicle Network (GVN, statistics show that in 2019 almost 80% of the total dispensed volume of gas for transport fuel was biomethane.
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Biomethane Map 2020 shows a 51% increase of biomethane plants in Europe in two years

The European Biogas Association (EBA) and Gas Infrastructure Europe (GIE) have released the second edition of the 'European Biomethane Map'. The analysis of the data collected shows that the number of biomethane plants in Europe has increased by 51% in 2 years, from 483 in 2018 to 729 in 2020. There are currently 18 countries producing biomethane in Europe. Germany has the highest share of biomethane plants (232), followed by France (131) and the UK (80). The comprehensive map locates and lists all known biomethane installations running in Europe. It has been produced with the information gathered from national biogas associations, energy agencies and companies.
The map provides specific details about each biomethane plant, including their connection to the gas grid, feed-in capacity, main substrate used, upgrading process and date of start of operation. Cross-border interconnection points and pipelines are also indicated.
The map brings additional data about the European biomethane market evolution, distribution of plants in European countries, and forecasts of natural gas and biomethane indigenous production in Europe until 2037.
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Gas for Climate new 2020 study towards gas decarbonization

The new Gas for Climate study develops gas decarbonization pathways from 2020 to 2050, and identifies what investments and actions are needed across the energy system along the way. The central pathway in this study achieves the 2050 Optimized Gas end state, as analyzed in the Gas for Climate 2019 study. Another study published earlier in 2019 showed that a smart combination of renewable electricity and gas can fully decarbonize the EU energy system at the lowest societal costs. It concluded that it is possible to scale-up the deployment of biomethane and hydrogen to 2,900 TWh (net calorific value), which is equivalent to 270 bcm of natural gas. It also showed that renewable electricity should be scaled up sevenfold by 2050 (to almost 7,000 TWh) to enable full decarbonization. The study concluded that, compared to a Minimal Gas scenario, the Optimized Gas scenario leads to societal cost savings of over €200 billion annually by 2050. EU policy must be strengthened to effectively foster the decarbonization of the European gas sector with e.g. Stimulate the production of biomethane and hydrogen by a binding mandate for 10% gas from renewable sources by 2030; foster cross-border trade of hydrogen and biomethane, by amongst others a well-functioning Guarantee of Origin system or incentivize demand for hydrogen and biomethane by strengthening and broadening the EU Emissions Trading System.

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UK Government launched consultation to scale-up biomethane production

The UK Government is planning to scale-up green gas (biomethane) production to heat around 230,000 homes, with more biomethane plants built as a result. Supported by the new Green Gas Levy, the UK Government is helping people across the UK to 'go green' on their energy supplies.
With the potential to prevent as much as 21.6 million tons of carbon dioxide (CO_2) entering the atmosphere, the government's Green Gas Levy will result in only minimal costs for consumers, starting at just 11p per month. The Green Gas Levy was first announced in the 2020 Budget earlier in 2020 and this announcement launches a consultation which invites views on how the final initiative will be designed and implemented. This new funding will support an ambitious scheme to decarbonise the gas grid that will prevent millions of tons of CO_2 from entering the atmosphere – another step towards reaching net-zero by 2050 at minimal cost to UK bill payers. Fully deployed, the biomethane industry could deliver a 6% reduction in the UK's greenhouse gas emissions by 2030 and provide heating for 6.4 million homes.

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Drop in sales and prices in the biomethane industry

The biomethane barometer 2020 shows declining feed-in rates for the first time but underlines the potential in the transport sector and international trade. DENA is conducting this data collection annually since 2012. Representatives of 83 German and some European companies in the biomethane sector took part in the survey. In 2019, the total feed-in volume of all plants in Germany fell by nearly 3% for the first time since the statistics were collected, and again fell well below 10 TWh per year. In particular, the continuing price decline observed last year is currently putting a lot of pressure on business prospects, especially on the producer side. According to 91% of the survey participants, this price drop mainly affects biomethane from energy crops, with an average sales price of 6.1 €cts/kWh. With the abolition of the avoided grid usage fees for some of the plants, biomethane is already difficult to produce economically. In contrast, the long-term business situation is slightly positive. Cross border biomethane trade continues to grow in popularity on the voluntary market as a blending product. The biggest driver of international trade continues to be the Swiss market, whose demand for biomethane is now being met with certificates from Denmark, Great Britain and Germany. In total, Switzerland's imports of biomethane certificates amount to over 500 GWh. The strong growth in recent years is mainly due to the purchase of certificates from the UK and Denmark. This is due to the large price difference of biomethane certificates from the various countries. Biomethane certificates from the UK, the Netherlands and Denmark can be offered at much lower prices, as biomethane in these countries has already been subsidized for feed-in to the natural gas grid.
More (in German)

Germany: Increase of biomethane in gaseous transport fuel

The CNG Mobility Industry Circle expects the share of biomethane in total CNG fuel to reach 50 percent by the middle of this year. The number of filling stations that offer 100 percent biofuel has also risen continuously. It is a continuous growth, after the biomethane share in the total CNG was still around 20 percent in 2018. In a conservative study for the ADAC, Joanneum Research had estimated the share in 2019 at only 15 percent. The ADAC study had certified that natural gas mobility with biomethane (CBG) had the best climate balance in comparison to other fuels. CBG cars performed even better than battery electric cars. According to the industry circle this is easy to understand because the use of fossil natural gas already produces around 23 percent lower CO2 emissions per energy unit than petrol. The use of pure biomethane from residual materials would even achieve a CO2 reduction of around 90 percent. With an average share of 50 percent residue-based biomethane, the climatic advantage of CNG mobility over other drive systems is increasing even more. According to Verbio, large scale biogas producer and member of the industry circle, more than 7 million CNG passenger cars or 200,000 CNG trucks in Germany could be supplied with 100 percent biomethane from surplus straw alone.
More (in German)