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# EUROPEAN BIOMETHANE CERTIFICATES MARKET REPORT

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2020



## Executive summary

Europe has experienced a dynamic development of biomethane production in recent years. Current biomethane production in Europe has reached 23 TWh or 2.2 bcm, of which Germany is the largest producer. Scenarios for future biomethane supply and demand vary among different studies. Gas for Climate has estimated that biomethane production in Europe could reach 370 TWh by 2030 and 1,170 TWh by 2050. The cost of producing biomethane via Anaerobic Digestion (AD) varies in a range of EUR 70 – 90/ MWh at present and is expected to drop to EUR 57/ MWh by 2050. For biomethane via the thermal gasification process, the production cost is around EUR 88/MWh currently and is estimated to drop to EUR 47/MWh by 2050. The aggressive emission reduction targets introduced by the EU Green Deal would likely lift the EU ETS price to EUR 55/tCO<sub>2</sub> in 2030 and possibly to EUR 150/tCO<sub>2</sub> by 2050. Emerging trends such as a sector coupling and biomethane as transport fuel will result in business opportunities for project developers, investors, and asset owners.

For gas suppliers and corporates, procuring biomethane certificates is a viable method to green their gas portfolios and set the respective greenhouse gas (GHG) emissions to zero.

Currently the market for biomethane certificates is growing at a rapid pace. While Denmark, Germany, the UK, and the Netherlands are the main certificate exporters, Sweden and Switzerland are the major certificate importers. Pan-European organizations and projects, such as ERGaR, AIB, and REGATRACE, have been established to facilitate EU green gas cross-border trade as well as to develop an EU-wide certificate system. According to AIB, Guarantees of Origin (GO) for biomethane will be ready for implementation by 2021.

Greenfact has conducted an analysis on the price development of biomethane certificates for the past two and a half years and found that the price range spanned from EUR 2.75/MWh to EUR 22.50/MWh (excluding Swiss certificates). Generally, biomethane certificates from the UK, the Netherlands and Denmark are offered at a discount due to support received for feeding into the national gas grid. In contrast, Swiss certificates have seen prices above EUR 80/MWh. Furthermore, we examined the prospective biomethane certificate system, including general principles and functionalities of registries and system processes.

The outlook for biomethane certificates depends heavily on several factors, for example the implementation of the EU Green Deal, acceptance of certificates, particularly from Denmark and Germany, under the EU ETS and the expiration of Renewable Heat Incentive (RHI) scheme in the UK.

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## Abbreviations

AIB	Association of Issuing Bodies
bcm	Billion cubic metre
BDEW	Bundesverband der Energieund Wasserwirtschaft e.V.
dena	Deutsche Energie-Agentur
EBA	European Biogas Association
EC	European Commission
ENTSO-E	European Network of Transmission System Operators for Electricity
ENTSOs	European Network of Transmission System Operators
ERGaR	European Renewable Gas Registry
GIE	Gas Infrastructure Europe
GGCS	Green Gas Certification Scheme
GWh	Gigawatt hour
IEA	International Energy Agency
IRENA	International Renewable Energy Agency
MWh	Megawatt hour
OIES	Oxford Institute of Energy Studies
REGATRACE	REnewable GAs TRAdE Centre in Europe