

# Green Gas Certificates

## Help Companies Report Lower Scope 1 Emissions

### Why do businesses purchase Green Gas Certificates?

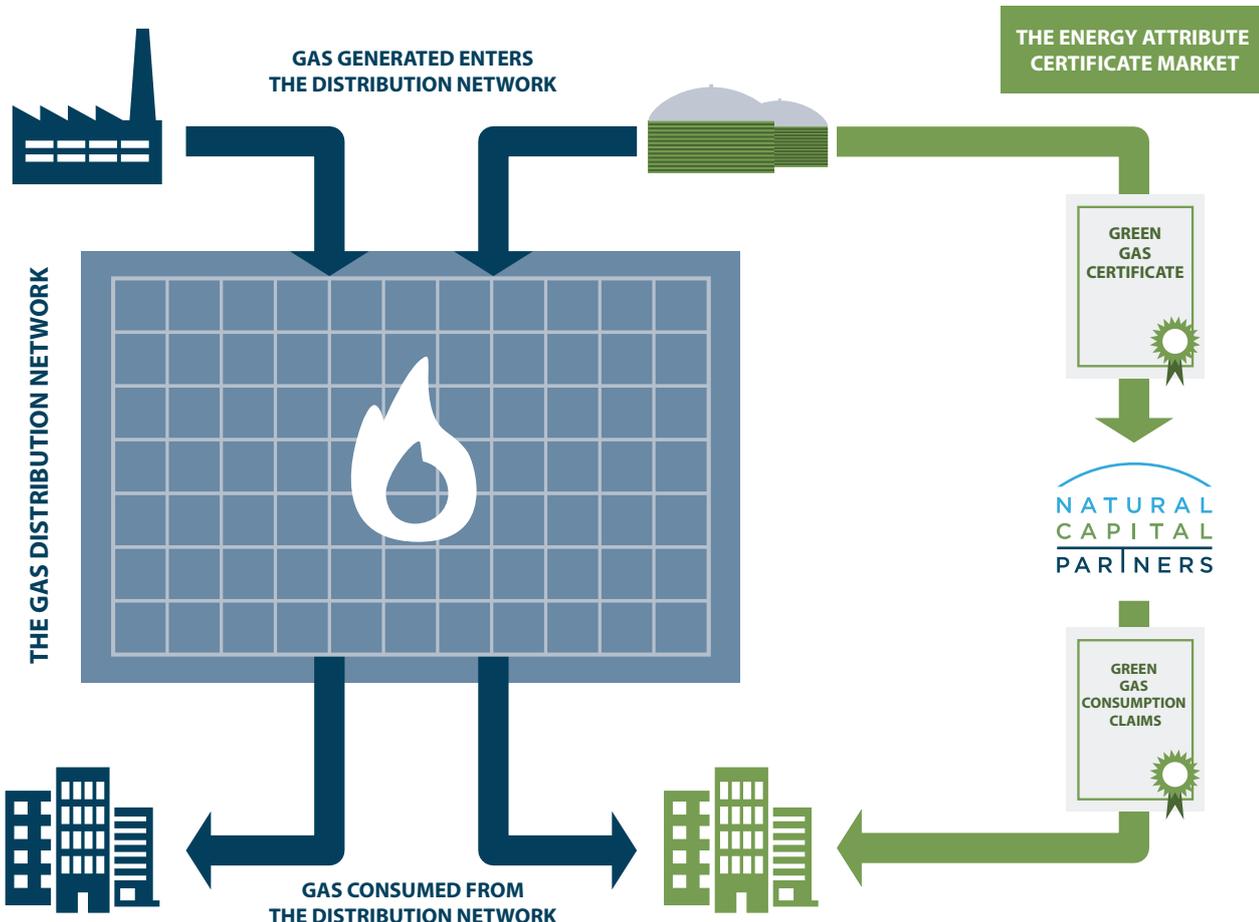
Natural Capital Partners offers clients with operations in the UK and Europe the opportunity to purchase Green Gas Certificates to address their Scope 1 emissions with renewable energy. Companies now have a cost-effective, quality solution to address their direct greenhouse gas (GHG) emissions from natural gas consumption. This can also contribute towards carbon neutrality or renewable energy goals.

### What are Green Gas Certificates?

Green Gas Certificates, or Renewable Gas Guarantees of Origin (RGGOs), each represent one kilowatt hour (kWh) of biomethane, or "green gas." They are a type of Energy Attribute Certificate (EAC) which labels gas as renewable.

Each unit of green gas injected into the grid displaces a unit of conventional gas. Certificates track green gas through the supply chain to provide certainty for those that buy it.

Figure 1: The Green Gas Certificate Market



## Credibility

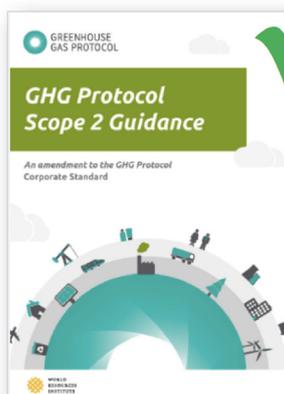
- Green gas standards such as the Green Gas Certificate Scheme (GGCS), established in 2011, enable the tracking of biomethane (“green gas”) from anaerobic digestion facilities that inject green gas directly into the gas distribution network.
- Green Gas Certificates enable companies to make 100% renewable gas claims and are recognised by CDP as a credible means for businesses to address their Scope 1 emissions from natural gas consumption.
- The GGCS registry tracks the production, sale and retirement of Green Gas Certificates and eliminates the risk of double counting, ensuring the integrity of renewable gas claims being made by consumers.
- Natural Capital Partners’ [CarbonNeutral Protocol Appendix 2](#) provides guidance on reporting GHG emissions from green gas.

## Green Gas as a Reporting Tool – CDP Recommendations

- Use robust tracking systems to assure data quality.
- Apply GHG Protocol’s Scope 2 quality criteria to Green Gas Certificates for verification.
- Green Gas Certificates “may be used to account for and report the Scope 1 emissions of combustion, where the emission rate is the one specific to the fuel origin presented in the certificate. This however is not a zero emission rate.”
- “We recommend that use of gas certificates be limited to users on the same pipeline network who can physically receive gas from gas plants on that network.”
- “Certificates can be purchased from either the same supplier as the gas or a different supplier, provided all suppliers and the user are on the same pipeline.”

Figure 2: Green Gas Certificates are Recognised by Key Reporting Frameworks

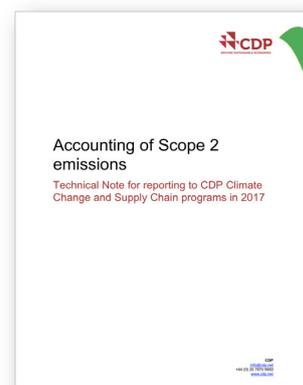
### GHG PROTOCOL SCOPE 2 GUIDANCE



### THE CARBONNEUTRAL PROTOCOL



### CDP



## A growing market for “green gas”

- The market for green gas is developing fast and more than 1.5 terawatt hours (TWh) of it has been consumed by businesses choosing to address their Scope 1 emissions with renewable power.
- Collectively, biomethane could supply more than 10% of the natural gas consumption of the European Union by 2030.
- Companies can play a role in this transition by demanding renewable gas and sourcing Green Gas Certificates.
- The European gas grid is very interconnected: the UK grid has interconnections to Ireland, Belgium and the Netherlands, the latter of which in turn has connections to the rest of Europe. This allows for the bi-directional flow of gas, meaning gas consumption in these three markets and beyond (for example in France and Germany) can be credibly addressed with a Green Gas Certificate from the UK.
- The concept for Europe is that the European gas grid is a single logistical facility, i.e. green gas injected into one part of the grid can be withdrawn from another, as long as there is a reasonable view that gas could have flowed in that direction.

## How is biomethane produced?

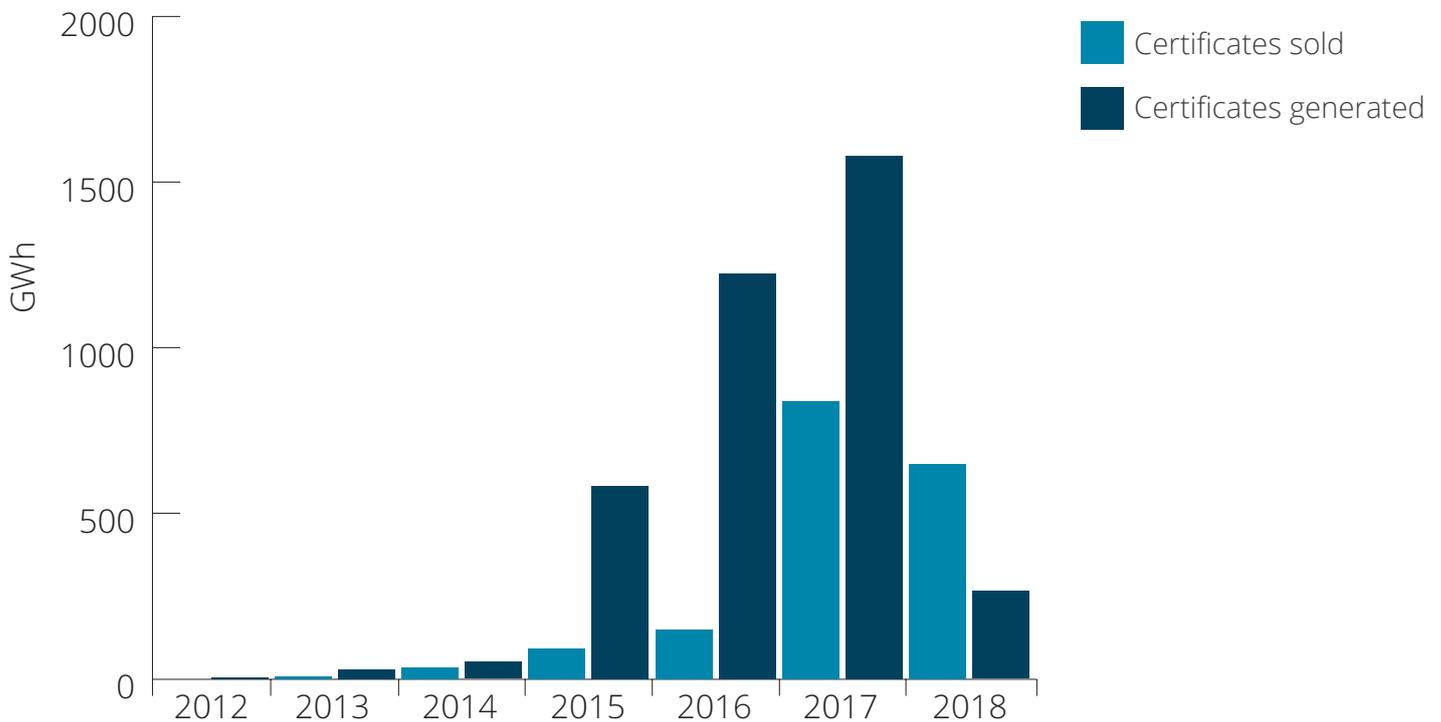
- Biogas refers to gas produced by the breakdown of organic matter in the absence of oxygen; a process called anaerobic digestion. Feed stocks include biodegradable materials such as manure, sewage, municipal water, green waste and plant material.
- Before biogas can be introduced to a gas grid it needs to be upgraded to pipeline standards, which involves drying the gas and removing corrosive elements to protect the pipes. Through that process biogas becomes biomethane.
- The upgrading process consists of drying the gas and removing hydrogen sulphide and carbon dioxide. The upgrading cost and the need for agreements for injecting biomethane into gas grids, mean biogas plants (where electricity is generated on site) are more common than biomethane plants that inject gas into gas grids.
- Injecting biomethane into the natural gas grid allows the use of energy from biomethane in areas located away from where the energy is generated. Biomethane can be used for any purpose currently satisfied by conventional natural gas including: heat generation, heat/power cogeneration and natural gas vehicles.

**Figure 3: Companies Can Purchase Green Gas Certificates from a Growing Number of Countries in Europe**

- Registry issuing Green Gas Certificates
- Registry in development



Figure 4: Green Gas Certificates Sold and Generated up to June 2018



### About Natural Capital Partners

Natural Capital Partners is a world-leading provider of innovative solutions for positive impact on the world's natural capital. With more than 300 clients in 34 countries, the company delivers high-quality solutions for renewable energy, carbon emissions measurement and reductions, water stewardship, building supply chain resilience and protecting biodiversity.

### [Contact us to find out how EACs can help your company to meet its target:](#)

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