

Your partner for green gases

Working together for a green future!

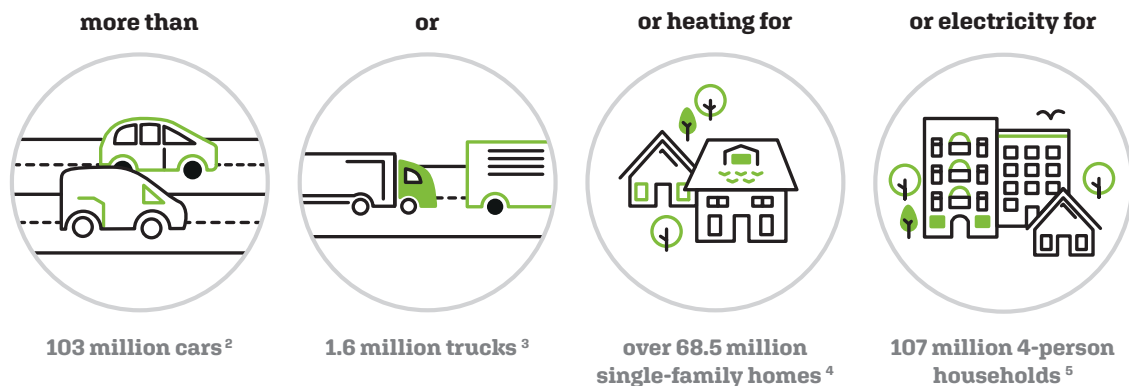




Acting together.

So that climate protection targets and cost-effectiveness are able to be planned.

According to analyses by Navigant, the next few years could see up to 1,010 TWh_{HS} environmentally friendly biomethane being produced in Europe – enough for



“ **Biomethane and other renewable gases are an important corner stone of a carbon-neutral economy in Europe.** By 2050, biomethane and other renewable gases will enable Europe to thrive on a fully renewable energy system – both on and off grid. Grounded in the benefits of a **circular bio-economy**, it will make optimal use of all our resources through integrated sustainable food production, nutrient recycling and waste treatment solutions, while also improving our security of supply and the storage of renewable energy.”

* Source: European Biogas Association

¹ Source: gasforclimate2050.eu/wp-content/uploads/2020/03/

Navigant-Gas-for-Climate-The-optimal-role-for-gas-in-a-net-zero-emissions-energy-system-March-2019.pdf

² Mileage: 14,000 km/a, average consumption: 5 kg/100 km

³ Mileage: 120,000 km/a, average consumption: 38 kg/100 km

⁴ Pure heat consumption of 14,000 kWh/a

⁵ Electricity consumption of 4,000 kWh/a, CHP electrical efficiency of 0.39

Green gases.

The clean technologies of tomorrow.

Our vision of the future is green. Together with our customers and production partners, we are therefore focusing on climate-friendly innovations that will drive forward the energy turnaround: products from and with green gases such as biomethane, green hydrogen, bio-LNG and SNG.

Bio-CNG: The environmentally friendly, high-density fuel

If biomethane is compressed to 200 bar, bio-CNG is obtained. Bio-CNG can be used as a substitute for fossil CNG.

Bio-LNG: The liquid gas with a small volume

Liquefied Natural Gas, condenses, when cooled to -162°C. It is ideal for transport and storage, as it has a volume of only one six-hundredth of natural gas. When biomethane is liquefied, the result is bio-LNG.

SNG: The synthetic natural gas substitute

Synthetic Natural Gas is produced from coal or biomass, bio-SNG from non-fossil CO₂ and green hydrogen from biochemical methanisation.

Hydrogen: Nothing but air and water

Hydrogen (H₂) is an emission-free fuel that, when used, generates water vapour. bmp greengas has set itself the goal of selling green hydrogen produced from renewable sources via the natural gas grid.

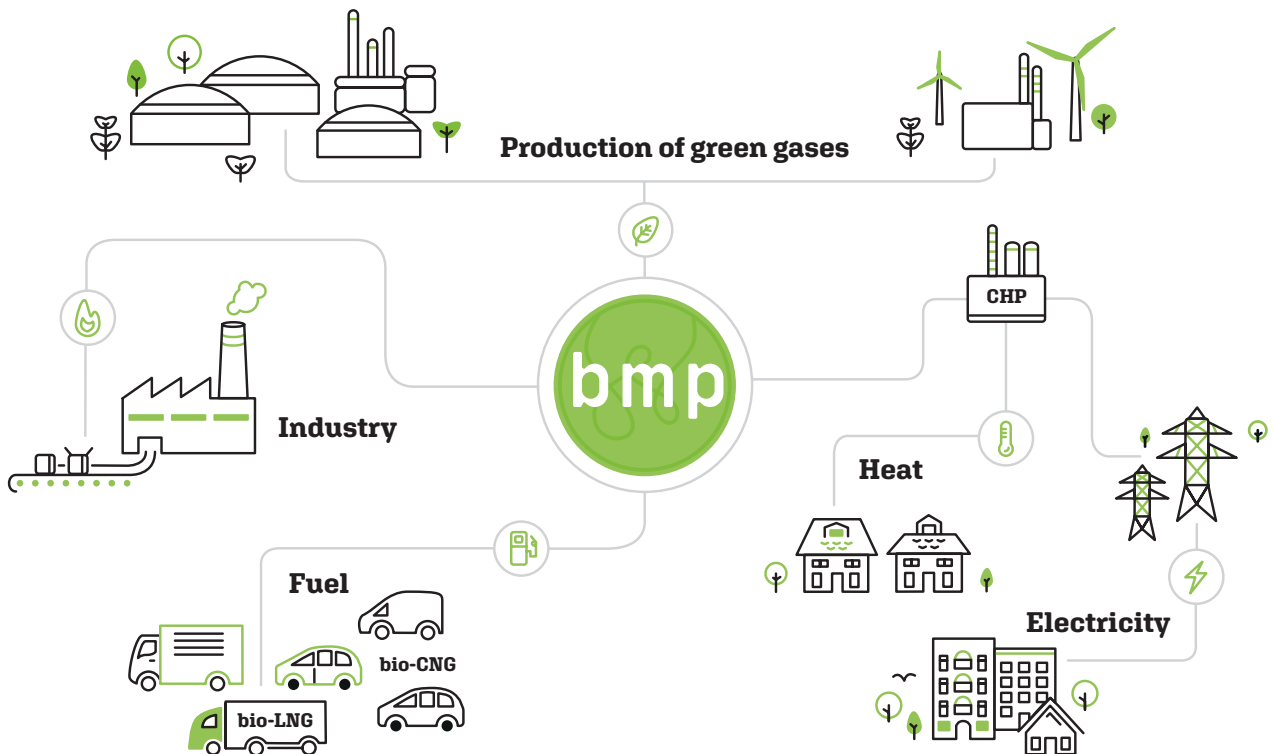
Biomethane is processed biogas generated during the fermentation of biomass. Green hydrogen and SNG are produced using surplus electricity from renewable energy sources such as wind, PV and water.

Biomethane and SNG can replace natural gas entirely.

Our **bmp greengas** portfolio. Keeping an eye on the grid at all times! From the producer to the customer.

Ordered. Delivered. Guaranteed with bmp greengas.

The basis for a secure supply of biomethane is the right balance between production and consumption.



Benefits of Biomethane



Biomethane saves resources

Agricultural waste products, such as **plant residues and organic substances** are available throughout the year. In biogas plants they are recycled directly on site, then processed into biomethane in a processing plant and **fed into the natural gas grid**. This means the fuel does not need to be transported over long distances. The uncomplicated procedure benefits both sides – the plant operator who can **sell biomethane profitably** and the consumer who uses a resource-saving and comparatively inexpensive energy source.



Biomethane supports regional value creation

Biomethane processing strengthens **regional suppliers, especially farmers**, as they are directly involved in its selling. Other professions also benefit from the regional promotion of bio-energy. For example plant constructors, engineers, craftsmen and technicians are all required for the construction and maintenance of biomethane plants. These in turn often come from the local area where the plant is located. A lot of **communities** also use biomethane as a **sustainable energy source** for swimming pools, public transport and the energy supply of municipal properties.



Biomethane is flexible

As an all-rounder among renewable energies, biomethane offers its customers maximum flexibility. Whether for **electricity or heat generation**, as a **biofuel** or for **use in the chemical industry**, the range of possible uses for biomethane is wide.



Biomethane enables a secure supply

Biomethane can be stored but does not require any additional storage capacities. Bio-energy can also be used independently of the production site because it can be fed into the natural gas grid. Whether the sun is shining or the wind is blowing, **production is guaranteed at all times**, regardless of weather conditions. Biomethane thus enjoys a clear unique selling point among renewable energy sources.





Biomethane makes us independent

There are approximately **700 biomethane plants** in Europe, and the market is continuing to grow. This is a welcomed development. Why? Because the more **“domestic energy”** is produced, the more Europe’s **energy sector is strengthened and the less dependent it is on imports**. Approximately 61 % of the EU’s energy consumption are currently imported from abroad. And that leads to risks such as the political situations within countries and relations with foreign partners are changing faster than ever. This makes it all the more important that renewable energies, which are being supported here in Europe, continue to gain ground. And the prospects are good: Never before have consumers attached so much importance to **sustainability and climate protection** as today. Europe also benefits from an excellent natural gas grid. The foundations for more energy from biomass are therefore in place, and biomethane thus has extremely bright prospects as a part of Europe’s future energy mix.



Biomethane supports climate protection

Biomethane overshadows other energy sources in terms of its energy balance and environmental friendliness. Used as a fuel, it can **reduce harmful CO₂ emissions by up to 200 %**.



Biomethane leaves a small CO₂ footprint

The **carbon footprint** records the amount of CO₂ emissions a person causes in a given time. If you leave a large footprint, your own CO₂ balance is negative. If, however, only a small footprint remains, fewer CO₂ emissions are caused and the climate is protected.

The energy supply sector accounts for around half of an average CO₂ footprint.

If biomethane is used as an energy source, **the footprint is reduced massively**.

This positive result can be used for image purposes. This is because **climate-friendly** external presentation is currently becoming increasingly important, especially for companies, as customers are paying more attention to climate-friendliness when purchasing a product.

Scaling-up renewable gas!

The new Renewable Energy Directive (RED II) includes a legally-binding EU-wide target of **32% for renewable energy by 2030**, with an upward review clause in 2023, as well as sector-specific objectives, including an annual **increase of 1.3% for renewable energy in the heating sector** and an end **target of 14% renewables in the transport sector by 2030**. The latter aims to promote the further deployment of electric mobility but it also includes a **sub-target of 3.5% for advanced biofuels and biogas**.

In general, the Directive is certainly a positive step towards the large-scale take up of renewable gas in the next decade. It will facilitate the **access of biomethane to the natural gas grid**, extend guarantees of origin from renewable electricity to renewable gas, and make the cross-border trade of biomethane easier. The new sustainability policy will restrict the production of biogas and biomethane, however, by introducing sustainability thresholds for all energy sectors. Biogas and biomethane must reach 65 %-80 % greenhouse gas savings relative to the fossil fuel comparators. **Sustainable feedstock** types are listed in Annex IX of the Directive and Annex VI determines the default emission values for different pathways. The Annexes are kept under continuous review. Biogas nevertheless remains one of the most sustainable energy sources, able to reach **over 200 % greenhouse gas savings** when the use of agricultural manure as a feedstock means methane emissions from manure are avoided. The Directive must be transposed into **national law in all EU Member States by 30 June 2021**.





EBA policy recommendations on renewable energy

- Guarantees of Origin to be implemented in a harmonized way across Europe: Make **virtual trading possible across borders**. The traceability and the transparency are essential components of the energy transition and consumer empowerment. Biomethane production must be certificated and valorized to the customers with the proper information about all its merits.
- Heat use: make the target in RED II of increasing renewables in heating by 1.3% binding and clarify the role of renewable methane in achieving this goal. Renewable methane can provide a **cost-efficient solution to increase renewable energy in heating** and tackle energy poverty.
- Financial support for the green gas transition based on the principle of 'polluters pay': an adequate carbon price is needed to internalise the negative externalities of local and global pollution – introduce **EU-wide carbon tax**; subsidies of the fossil fuels must be phased out – technology specific support schemes are crucial – benefits of biogas/biomethane are completely different (and complementary) from those of intermittent renewables but renewable gas receives less support in most parts of Europe. European financing mechanisms, for instance through EIB, should be directed to **support biomethane project development**.



The fuel for mobility

**Fill it up, please!
Switch to biomethane
entirely.**

- ✓ **Better CO₂ balance than fossil fuels**
- ✓ **No changes to service stations and natural gas vehicles necessary**
- ✓ **Up to 100% admixture possible**
- ✓ **Less pollutant, particle and noise emissions**
- ✓ **Counts towards the biofuel quota**

Many natural-gas filling stations have already switched to biomethane due to the energy turnaround. Switching to green fuel also offers you decisive advantages. Biogas from organic waste processed into biomethane or produced synthetically by means of power-to-gas from wind or solar energy is the climate-friendly and future-proof alternative to conventional fuels and natural gas. Biomethane can be added to natural gas as a sustainable fuel up to a ratio of 100%.

Green fuel: good for the environment and the bottom line

The use of biomethane at stations is not only good for the environment but is also commercially interesting. As a sustainable fuel, it is tax-privileged and counts towards the biofuel quota.

There are also many good reasons for end customers to fill up using this green gas: it is considerably cheaper than petrol and diesel, and the range of natural-gas cars is longer than that of electric vehicles. This is why biomethane is becoming increasingly important for service stations.

Our service for you:

With our expertise and knowledge of the industry, we will support you in switching to biomethane fuel – from secure procurement/delivery, through accounting and verification management, to certification. To this end, we offer delivery precisely according to your wishes at a physical exit point (PEP) or the virtual trading point (VTP) at guaranteed prices in the desired quantity.

In addition, we take care of the transfer of the greenhouse gas reduction quota (GHG quota), which is generated when refuelling with biomethane, natural gas and electricity. We guarantee service station operators and electricity suppliers complete acceptance and a binding fixed price, bundle the quotas and then pass them on to the companies that are subject to quotas, such as oil companies. This way you can easily generate additional revenues without any marketing risk.

Certification according to REDcert

REDcert is a certification system for biomass produced in Germany and Europe that is recognized by the European Union and the Federal Agency for Agriculture and Food (BLE). With a REDcert certificate, companies prove that their biomethane production or its use as fuel or electricity is sustainable in accordance with EU requirements. We help you certify your plant and guide you through the certification process.

Biomethane can be used as a vehicle fuel in two forms: for passenger cars as gaseous, **compressed CNG** (compressed natural gas) or in heavy goods, rail or ship traffic as **LNG** (liquefied natural gas) – and always in up to 100% organic quality.

3,840 stations! By 2030, the number of natural-gas service stations in Europe is set to triple in size.

Source: EBA

When 100% biomethane is used, up to **200%** less CO₂ is generated.



Biomethane in the heating market

Heat things up! Use green heat now.

- ✓ **Reduction of the primary energy factor**
- ✓ **Price security over the term of the contract**
- ✓ **Flexible and secure delivery**
- ✓ **Contribution to climate protection**

Are you prepared for the requirements of the turnaround in energy and heating policy? The use of biomethane can be an easy way to increase the share of renewable energies in the heat supply.

Green heat for a green climate

When used for combined power and heat generation, biomethane is currently one of the most efficient and ecological technologies on the market, particularly in pure heating applications and especially when other renewable technologies or structural measures cannot be used to the necessary extent to reduce energy consumption.

The heat generated by the operation of a combined heat and power plant (CHP) or by direct combustion in gas boilers can be used, for example, to heat buildings, for drying processes or as process heat.

Heating with biomethane is becoming increasingly popular

Follow the trend towards green gas tariffs. The number of private customers who are willing to pay a surcharge for heating with renewable energies is growing steadily. Pure biomethane or natural gas-biomethane mixtures can be used in conventional gas heating systems without any need for adaptation.

District solution: integrated energy systems for a clean environment

Biomethane is also suitable for the direct supply of heating to buildings. We supply energy for the energy supply concepts of residential districts and buildings, with heat and electricity generated directly on site in cogeneration plants. In this way you can reduce the primary energy factor and fulfil the legal requirements.

Our service for you:

If you want to increase the share of renewable energies in your portfolio, we offer you the optimal product. Use natural gas from your portfolio to generate a suitable admixture product that precisely corresponds with the requirements of your end customers. We will supply you with up to 100 % biomethane at the virtual trading point (VTP) in all market areas.

If desired, biomethane for heat production is obtained exclusively from residual and waste materials. This makes it particularly **re-source-saving** and **climate-friendly**.

The share of renewable heat is **to increase by 1.3 % per year until 2030**.



The raw material for industry

Make products green! Biomethane in the production process.

- ✓ **An environmentally friendly raw material**
- ✓ **Fewer greenhouse gas emissions**
- ✓ **Sustainable production**
- ✓ **Replaces natural gas easily**
- ✓ **Creditable in EU ETS**

In industry, biomethane can be used in the exact same way as natural gas as a process gas or as a raw material for the production of the material. What advantages does green gas offer you? Currently, conventional energy sources are still frequently used. The use of renewable biomethane, on the other hand, produces only low emissions – the CO₂ savings potential compared to fossil fuels is enormous. Biomethane is therefore ideally suited to replacing fossil raw materials with renewable energy sources.

Approximately 3% of Germany's natural gas requirement is for the chemical industry for material use. Here, natural gas, a fossil fuel, could be **entirely substituted by biomethane.**

Sustainable production, sustainable packaging

Although biomethane has the same combustion properties as fossil natural gas, it reduces CO₂ emissions by up to 90 %. Switching to biomethane in your production, but also in the manufacture of your packaging, can therefore help your company to meet legal requirements and sustainability goals. At the same time you will create added value for your products and thus a competitive advantage, since more and more consumers are looking out for sustainable products.

42% of natural gas sales are to industrial companies. For the purpose of green production, these could be entirely replaced by biomethane.

Biomethane Emission factor 0

The EU Emissions Trading Scheme (EU ETS) is a core element of the EU's climate change policy and the main instrument for cost-effective reduction of greenhouse gas emissions from industry (Source: Emissions Trading Scheme (EU ETS) | Climate Policy (europa.eu)). Plants subject to emissions trading under EU ETS can apply emission factor 0 when using biomethane.

A valuable raw material in chemistry

In the chemical industry, biomethane is used for ammonia and hydrogen production in the steam reformer. When converted into synthesis gas, biomethane can also be used to produce various basic chemicals. These can be used to produce a range of different products – from fertilizers and bioethanol to biohydrogen and plastics.

Our service for you:

With our in-depth experience we will help you become a bio-based industry. More and more of our partners are pursuing a more sustainable approach and are replacing natural gas, a fossil raw material, with renewable biomethane – saving resources and reducing greenhouse gas emissions. We are happy to supply you with all required biomethane qualities from a single source and to document the sustainability characteristics along the entire supply chain.



Power generation in CHPs

Electricity generation with biomethane – a successful concept.

- ✓ **A long and short-term as well as guaranteed biomethane price – over 10 years**
- ✓ **Different biomethane qualities available**
- ✓ **Flexible and secure delivery**
- ✓ **Demand-driven power generation**
- ✓ **Reduced CO₂ emissions**

The use of biomethane in combined electricity and heat generation is one of the most efficient and eco-friendly technology options. That is why combined heat and power (CHP) and gas plants are increasingly using green gas for power generation. Even if you are operating an older combined heat and power plant (CHP), switching to biomethane can be more economical than operating it with natural gas.

Our service for you:

We will supply you with the biomethane quantities you require for 10 years or more, and at the same time offer you guaranteed fixed prices for the entire duration of the contract. No other energy source offers as much price certainty and predictability. In addition, we will supply the biomethane to your desired location: you may extract the gas directly at the flange of the CHP, or alternatively you can opt for delivery at the virtual trading point (VHP) or into a sub-balancing group.

Not all biomethane is the same. Physically it is natural gas, and its quality depends on its production and use.

A forty times increase: In 2019 over 26 terawatt hours of biomethane were produced in the EU each year. **According to Gas for Climate, by 2050 the amount could be more than 1,000 TWh.**

Trade strongly. Sell biomethane successfully.

Do you produce biomethane and want to sell it? Thanks to our many years of experience selling biomethane, we're just the right partner for you. Due to our constantly growing portfolio, we are always interested in new suppliers and make no distinction between large corporations and independent farmers. With our proven portfolio and risk management, you can rely on us to meet your needs.

Acceptance of all qualities and input materials

- Agricultural and industrial waste and residues
- Waste from organic waste bins
- Sewage sludge
- Energy crops
- Synthetic methane and green hydrogen (power-to-gas)
- Raw gas and LBG through our affiliated partners



Flexible

We pay particular attention to providing you with the necessary flexibility, security and professionalism so that you can be successful and sustainably active in the market.

Benefit from our experience – our purchasing department will be happy to advise you on all topics relating to biomethane. In doing so, our goal is always to create good long-term conditions for all market participants and to further advance biomethane as the key to the energy transition.



Secure

The bmp greengas business model offers you the highest-possible degree of security. We guarantee to take delivery of the produced quantities at any time and to reimburse you on time. Accordingly, you do not have to bear any selling or purchasing risks and enjoy planning security over the entire contract term. We guarantee this with our long-standing and proven set of contracts. In addition, our corporate background – Erdgas Südwest and EnBW – offers additional security.

- Secure supply relationship
- Risk-free selling
- Payment security
- Proven set of contracts



Professional

With our many years of experience and our specialisation in the procurement and trading of biomethane, we provide you with competent and professional advice. We deploy our specific market knowledge and always communicate with you as equals. You benefit from our large network with long-standing relationships with investors, project planners and other market participants.

- Many years of experience in the market
- Concentration on the biomethane market
- Partner of the biogas register of the German Energy Agency (dena)
- Short reaction times

All services from a single source.



Balancing Group Management

Our range of services covers all areas of biomethane selling – from acceptance, balancing group management and settlement, to uncomplicated and cost-saving transport management and proof-of-origin management in the biogas register of the German Energy Agency (dena). We deploy our expertise in market communication and consulting and provide transparency and an overview through monthly reports on the latest developments in your balancing group.



Portfolio Management

Get access to a large and diversified biomethane portfolio that will help you optimize your own portfolio. We will help you balance out surpluses and shortages. This will give you flexibility, independence and the necessary security of supply for your acceptance points. We guarantee compliance with accounting rules and will monitor your flexibility framework.



Consultancy and Sale

We are happy to put our experience and expertise in consulting projects at your disposal. In most cases the focus is on topics such as feed-in, selling and recycling paths, as well as questions on the Renewable Energy Sources Act, balancing group management and proof-of-origin management. We support our customers with the switch to renewable gases for use in combined heat and power generation, thermal or material use or in the field of mobility – fail-safe and with the right characteristics for the intended use. All the products are individually adapted to the customers and safe, as well as future-oriented solutions.



Documentation and Verification

We will take care of proof-of-origin management for you in the dena Biogas Register and for the fuel market in the sustainable biomass system (Nabisy). This is because verification is the basis for a claim for remuneration and for recycling paths such as the heating and fuel market.

What we do, how we think, what drives us.

The energy turnaround is without doubt one of the greatest challenges of our time. For more than 14 years, therefore, we have been developing efficient solutions for the energy supply of tomorrow.

bmp greengas is Germany's leading distributor of biomethane and expert for green gases. We are convinced that by supporting companies in the transition to a sustainable energy supply with biomethane, green hydrogen, bio-SNG and bio-LNG, we are making a valuable contribution to the energy turnaround and rendering it economically viable for our partners.

As a subsidiary of Erdgas Südwest GmbH and part of the EnBW Group, our energy expertise is firmly anchored in our DNA. And that's what drives us. Together we want to put green gases on a growth track. In other words:

Together we are acting for a green future.

At the same time, we always remain true to ourselves – for four very valuable reasons:



Conviction.

We firmly believe in a CO₂-neutral energy supply. That is why we have made the energy turnaround our mission.



Foresight.

With courage and prudence, we like to think outside the box in order to the best solution for our customers and our climate.



Energy.

bmp greengas stands for sustainable energy. This applies not only to our products, but also to everyone in our team.



Partnership.

We are there for each other, our customers and our suppliers. Honest and fair – that is what we stand for at all times.

Our contact persons.

Trust is the beginning of everything.

Get to know our committed bmp greengas team. We will answer all your questions and give you individual and expert advice. We're here for you!

With a **portfolio volume** of over **3 TWh** we are the largest distributor of biomethane in Germany!

We have been successful on the market with bmp greengas for more than **14 years**.

There for you: **over 50 employees** at the Munich site.

Let's act together **for a green future!**

Simply make an appointment to learn more about the potential and advantages of green gases in your company without any obligation!



+49 (0)89 30 90 587-0



+49 (0)89 30 90 587-888



info@bmp-greengas.de



www.bmp-greengas.com



bmp greengas GmbH

Ganghoferstraße 68a
80339 München
Deutschland

www.twitter.com/bmp_greengas
www.xing.com/companies/bmpgreengasgmbh
www.linkedin.com/company/bmp-greengas-gmbh
www.facebook.com/bmp.greengas.GmbH/

Make your own Green Deal!

Climate targets and economic efficiency can be planned. And as experts in green gases, we know how! We support companies in Germany and Europe in converting to a sustainable energy supply with biomethane.

We offer and buy low-CO₂ biomethane to replace natural gas:



For green electricity
in CHP



As a green
fuel for transport



For green
heat



For green production
processes

For users:

We offer the right
feedstock for each
application.

For producers:

We find the optimal
marketing route for
your biomethane!



Working together for a green future. Join us!

www.bmp-greengas.com



To save resources and CO₂,
we print climate-neutral on
recycled paper.

