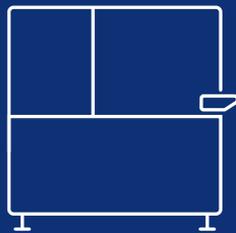


XRGI[®]
BIOGENIC



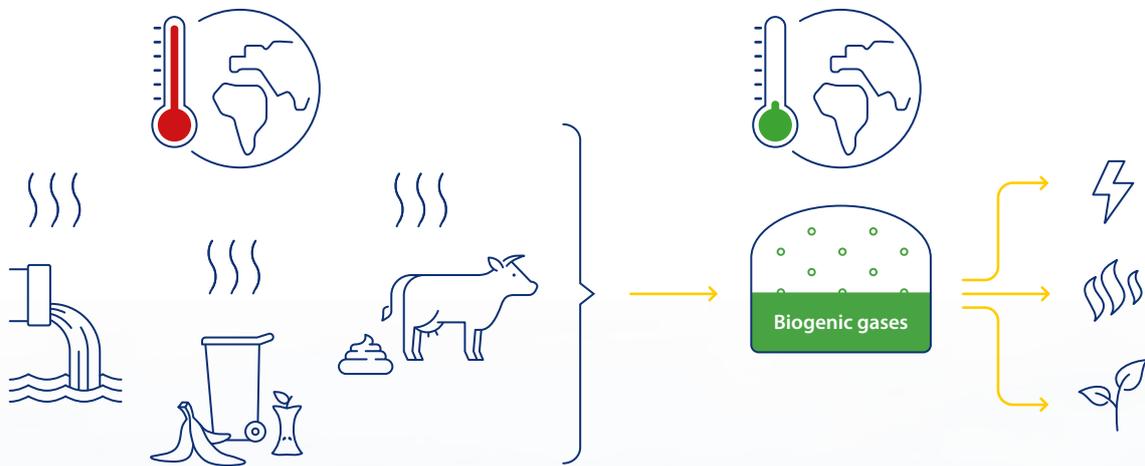
The set assignment

Biogenic gases play an important role in reducing the climate footprint.

Biogenic gases occur during the fermentation and decomposition of organic matter under anaerobic conditions – such as manure, sewage sludge, food waste and other biological waste products.

Using biogenic gases from waste for energy production ensures a state of net-zero CO₂ emissions. The CO₂ is captured by the biomass before you use it as an energy source, which means that the carbon is circulated in short cycles. This achieves a balance between the amount of carbon emitted into the atmosphere and the amount of carbon removed from the atmosphere.

Biogenic gases consist mainly of methane, which is also the main component of natural gas. Methane is a high-quality fuel, but also 20-40 times more climate-damaging than CO₂. Even small amounts of methane cause a significant greenhouse effect. Methane must therefore be combusted to reduce its climate impact.



With combined heat and power technology, you utilise the biogenic gases from your waste product for energy supply – putting the resources at hand to good use. This means you can:



Rethink waste

by using it as an energy resource



Decrease climate footprint

by replacing fossil fuels



Reduce operating costs

by using on-site biogenic gases

Get in the loop

The XRGI® BIOGENIC from EC POWER creates a circular and sustainable energy system.

With more than 25 years of experience, EC POWER is Europe's leading manufacturer of combined heat and power (CHP) units in its class. Our XRGI® units offer a constant high degree of utilisation, making this a cost-effective energy technology.

EC POWER's CHP expertise forms the foundations of XRGI® BIOGENIC, which runs on biogenic gases to generate heat and power on-site. XRGI® BIOGENIC can be used wherever biogenic gases are created and captured. This happens primarily in agriculture, wastewater treatment, food waste recycling, and landfills. Filtering the biogenic gases before use enables the XRGI® BIOGENIC to run on many different gas qualities.

XRGI®
BIOGENIC



The four wins



Green electricity on-site:

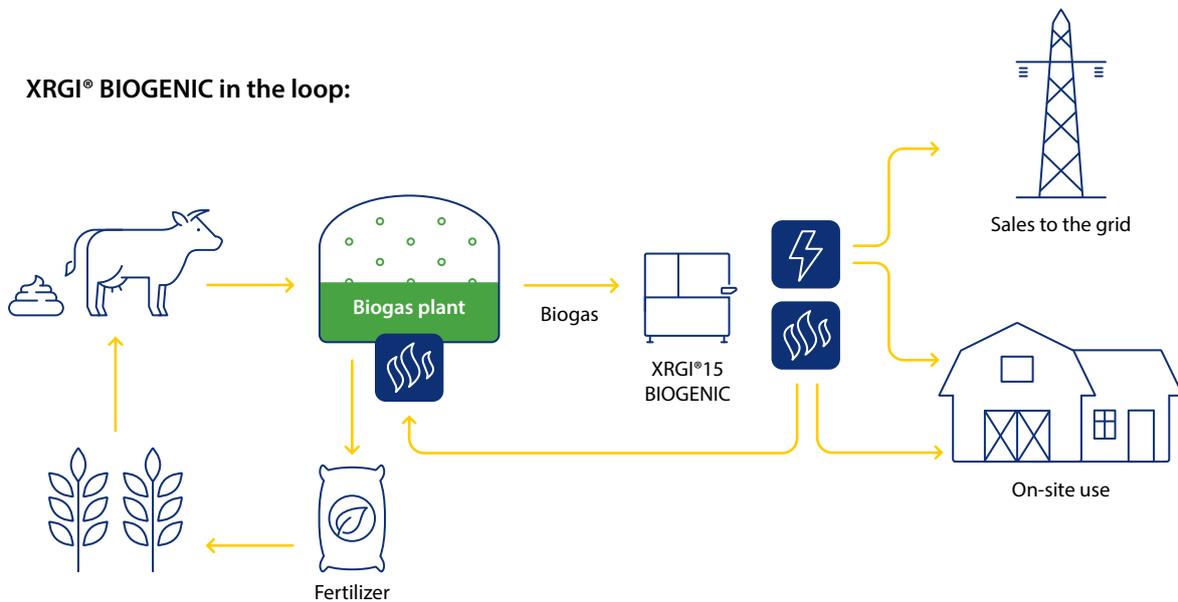
The biogenic gases from your waste product are burned in the highly efficient engine of the XRGI® BIOGENIC. The engine runs a generator which produces electrical power.



Green heat on-site:

Heat arises as a by-product in the XRGI® BIOGENIC. This heat is returned to the biogas plant to ensure the correct temperature for the fermentation process, high gas yields, and good process stability.

XRGI® BIOGENIC in the loop:



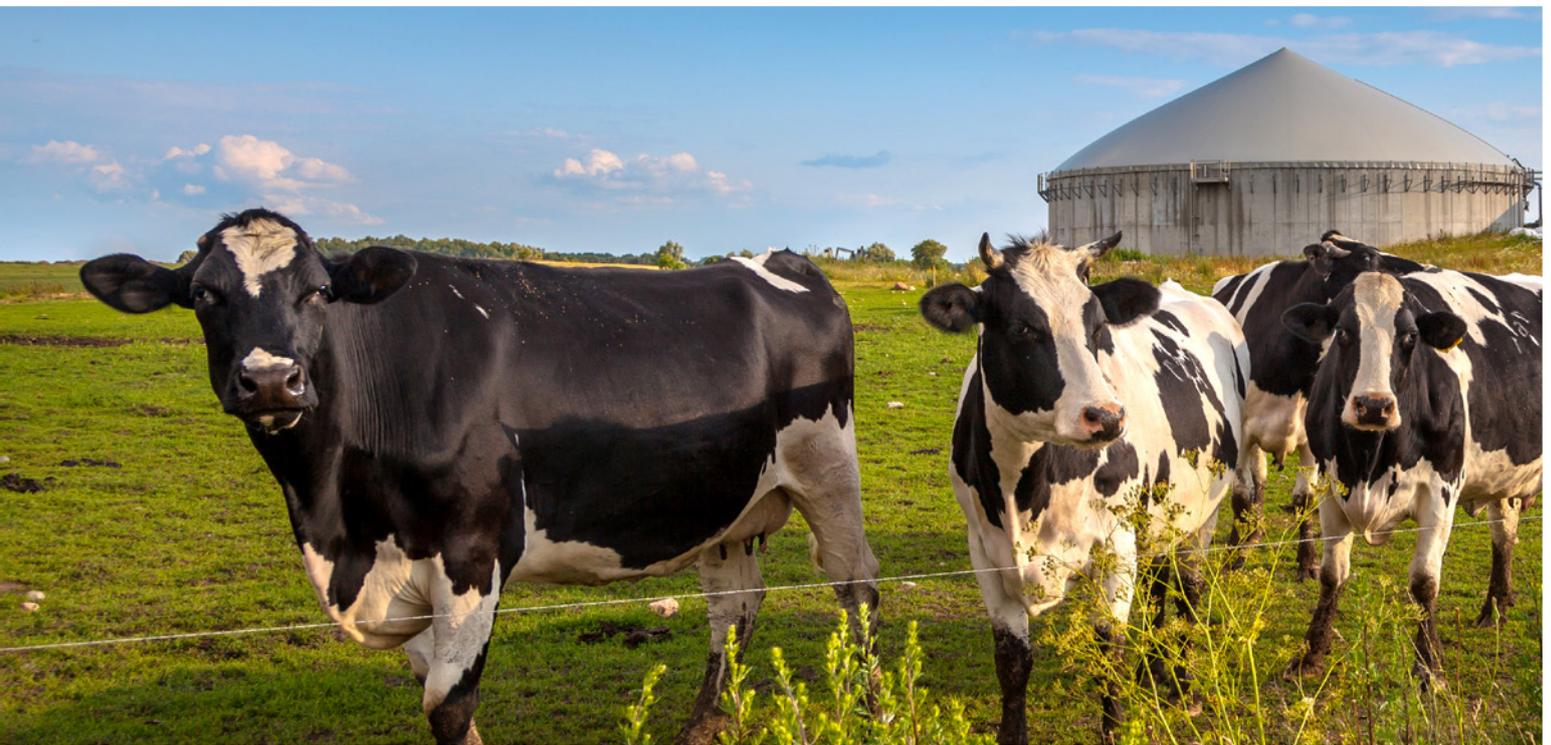
High-quality fertiliser:

The residual biomass is a better-quality fertiliser and much less problematic for soils and waters than the original raw manure. It is more easily absorbed by plants, which ensures less nitrate seeps into the aquatic environment.



Less smell from the biomass:

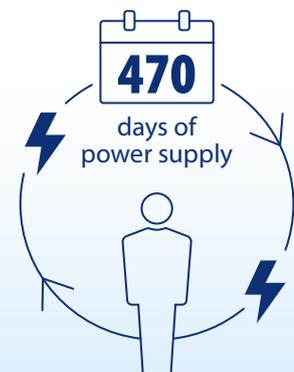
The residual biomass does not smell as strong as raw manure; the organic compounds that smell have been degassed during the biogenic gas production.



Manure from two cows can easily cover your electricity consumption for a year

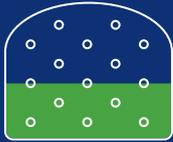
Animal waste is a substantial untapped resource for energy production. With the XRGI® BIOGENIC, you can turn manure and other organic waste products into energy.

Two cows produce approximately 40 m³ of manure slurry a year. Degassing this manure slurry in a biogas plant and using the biogenic gases in the XRGI® BIOGENIC generates more than enough electricity to cover one person's yearly electricity consumption in the EU.





182,500
m³/a biogas



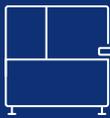
1,861,500
m³/a waste water



20,000
population equivalent



XRGI
BIOGENIC



349,944
kWh/a



739,034
kWh/a



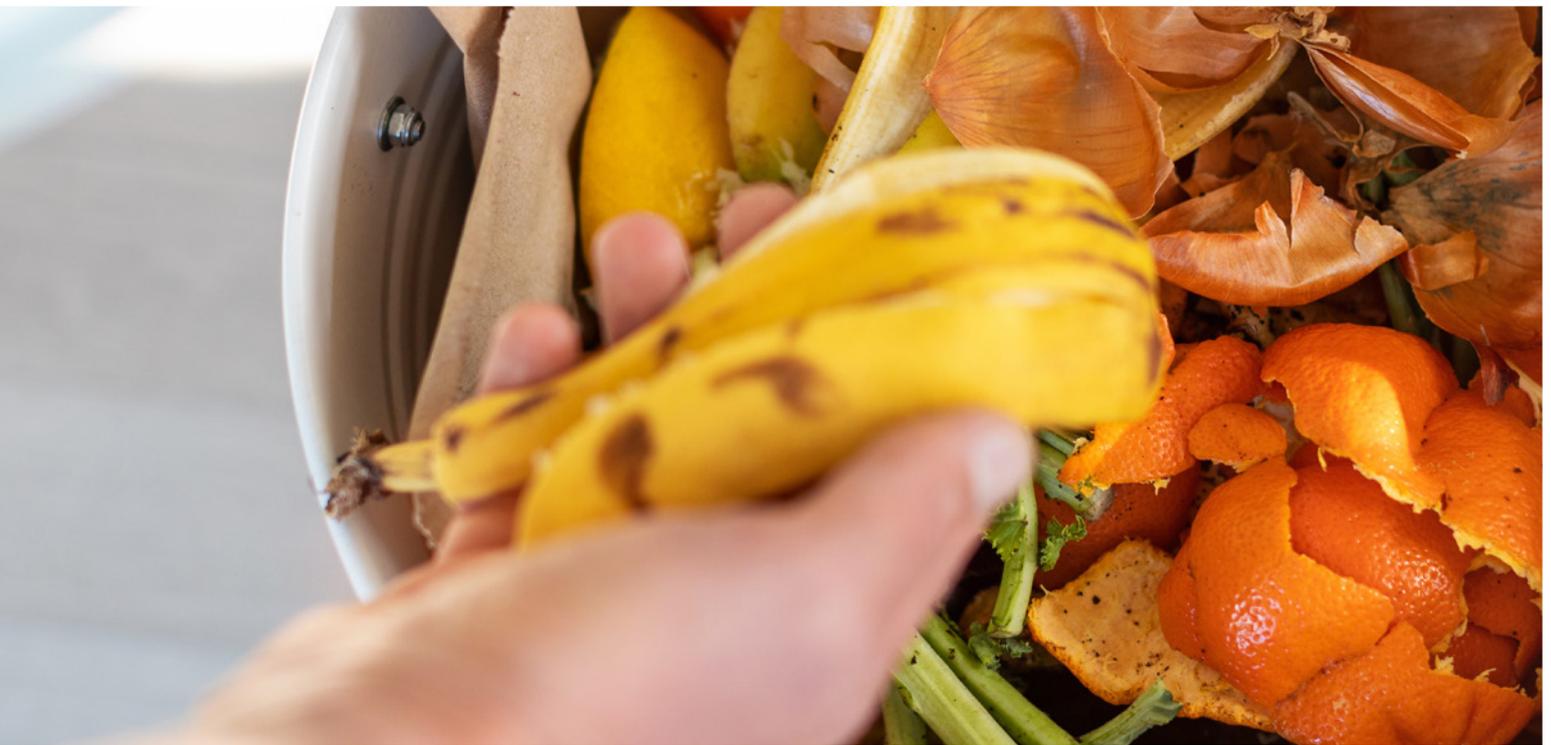
135,212
kg/a CO₂ reduction

Wastewater loop

Biogenic gases occur naturally during the wastewater treatment process. With XRGI[®] BIOGENIC, you can transform this on-site waste product into heat and power.

Wastewater treatment plants account for a significant share of the total electricity demand in municipalities. XRGI[®] BIOGENIC generates electricity on-site, supplying a substantial share of your wastewater treatment facility's electricity demand. Furthermore, heat is produced concurrently to heat the digester. This reduces your operating costs.

Using the biogenic gases in XRGI[®] BIOGENIC ensures an effective use of this wastewater treatment by-product and replaces fossil fuels. This lowers the climate impact of your wastewater treatment facility.



Biowaste loop

Organic waste is the largest of all waste categories globally. With XRGI® BIOGENIC, you can tap into this considerable waste-to-energy resource.

Unused food has a significant environmental impact; letting food go to waste is responsible for 8-10% of global greenhouse gas emissions, according to the UNEP Food Waste Index Report 2021.

Food loss and waste happens at all points during the food production value chain: in agriculture, food processing, supermarkets, restaurants, hotels, and households. We cannot completely remove food waste, and therefore it is important to use our food waste effectively. The biogenic gases from the decomposition of food waste are put to good use as a renewable fuel in XRGI® BIOGENIC, reducing your carbon footprint.



EC POWER

Near you everywhere and at all times

Since EC POWER was founded a quarter of a century ago, we have been closely associated with the industry. As partners on an equal footing, specialist companies throughout Europe provide competent advice, sales and service for our products. For us, this cooperation is more than a business relationship – it is the mainstay of our success.

Thanks to this Europe-wide, specialised EC POWER partner network and our comprehensive factory customer service, a competent contact is available everywhere, at all times and for every concern.

GET IN TOUCH WITH US.

Whether you are an operator, planner, energy consultant, commercial/industrial customer or municipality, we will find the tailor-made energy solution for your project.



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