

Biomethane: Europe's sleeping giant stirs

A landmark report from the European Biogas Association resets the ambition clock for biomethane across Europe - and its CEO, Harmen Dekker, is in no mood for excuses. The potential is there. The technology works. Now comes the hard part.

Europe's energy transition has never lacked ambition – but ambition is not the same as delivery. As the continent accelerates its push to decarbonise industry, heat and transport, one question keeps resurfacing: how do you replace fossil gas in the parts of the economy that electricity cannot easily reach?

The European Commission sought to answer that question through 2022's landmark REPowerEU plan: biomethane. Alongside measures to reduce energy consumption and diversify supplies, the plan set a target of producing 35 billion cubic metres (bcm) of biomethane annually by 2030. Four years later, Europe produces around 5 bcm of grid-quality biomethane each year. While few other options offer the same combination of practical advantages - renewable, domestically produced, and compatible with infrastructure that already exists - the gap between ambition and reality remains substantial. That infrastructure, it bears noting, is not abstract. Companies like GRDF, which operates the largest gas distribution network in France and has been actively mapping biomethane potential against grid access and rural territory for nearly a decade, have long understood what is at stake. The molecule is ready. The pipes are ready. The question is whether the policy and the feedstocks will follow.

This spring, the European Biogas Association (EBA) published an updated assessment of Europe's sustainable biomethane potential, prepared by consultancy Guidehouse. The report is both a demonstration of what could be achieved and a candid assessment of why progress has yet to match the sector's promise.

Harmen Dekker, CEO of the EBA, takes us through the findings, the barriers and the measures that could finally unlock biomethane's full potential.

A target under pressure, a sector with everything to play for

Produced through the anaerobic digestion of organic waste or the gasification of woody biomass, biomethane is renewable, chemically identical to fossil natural gas, and can be made entirely from domestic resources. Unlike green hydrogen, it requires no conversion of end-use equipment and can be transported through existing gas infrastructure. Unlike wind or solar, it is dispatchable, storable, and available in every European region all year round. It is, in short, one of the most practical renewable energy solutions available to Europe today - one that fits the system the continent already has.

The next question is whether Europe has enough sustainable resources to produce it at scale. According to the EBA's latest assessment, the answer is unequivocally yes. The total potential for biomethane and e-methane is assessed at 34–35 bcm per year in 2030, leaping to 116–132 bcm in 2040 and reaching 181–205 bcm by 2050. Europe is not short of resource. It is short of urgency. The 2030 figure has been revised downwards from the previous edition - not because the fundamentals have changed, but because insufficient

policy action has narrowed what is realistically deployable in the time remaining. "If the ambition isn't translated into rules and targets, things don't go as fast as we want to see," says Dekker. The antidote, he argues, is a three-pronged push: faster permitting, clearer legal definitions for sustainable feedstocks, and the kind of territorial planning that turns potential on paper into projects in the ground.

From farm waste to marginal land: every source counts

The EBA report maps a rich diversity of feedstocks: agricultural residues, animal manure, food waste, industrial wastewater, sewage sludge, sequential crops, and marginal or contaminated land. "There is no preference," says Dekker. "We use all feedstocks that are sustainable and available. We just need to make sure we unlock all of them."

Animal manure is the most immediate opportunity: widely available, significantly underutilised, and delivering benefits that extend well beyond energy production, including cutting fugitive methane emissions and enabling nutrient recycling through digestate. Sequential crops - cultivated in fallow periods between two main harvests - represent a subtler but equally significant potential. Often confused with energy monocrops, they are, Dekker insists, something entirely different: an agroecological system with deep agronomic roots. He points to a Swedish farmer who spent a decade integrating sequential crops and a biogas plant into his rotation. The result: better yields, almost no pesticide use, and a reduction in chemical fertiliser requirements. "It works even in a cold climate." The obstacle, he argues, is not agronomic but regulatory. "The easy answer is to ensure this is fully recognised in legislation everywhere in Europe."

Permitting, planning, and the French example

Even where feedstocks are available and the project economics are favourable, development can stall at the permitting stage - long before construction begins. Dekker has a concrete proposal, and a working example of how public authorities can accelerate deployment through smarter planning. "France developed a zoning approach: they mapped feedstock potential, overlaid it with the gas grid, added rural community data, and brought it all together. Where the maps converge, you know exactly where you can easily accelerate building biogas plants."

That model - pioneered in France partly through the active involvement of grid operators like GRDF, who contributed their infrastructure data and territorial expertise - is now a reference for what joined-up biomethane policy can look like. By identifying areas where resources, infrastructure and local conditions align, governments can establish renewable acceleration zones and, within them, streamline permitting radically: near-automatic approval for projects meeting best-practice criteria, faster public consultation, and a clear administrative pathway. "France set this example seven or eight years ago," says Dekker. "It is time others followed - and the European Commission has a role to play in making that happen."

A different message for every room

When asked what he would say to the farmers, industry players and policymakers who will read this article, Dekker resists the temptation to offer a single slogan. Instead, he offers three: "For farmers: we can make the ecological transition while keeping your yield. For industry: this is a competitive scenario while we decarbonise. For politicians: recognise it - because we can scale it, we have it in Europe, it is literally beneath our feet."

The resource already exists: in agricultural residues, animal slurry, food waste, and wastewater streams across every European region. The infrastructure to carry it already exists too. What is needed now is policy coherence to bring both together - at speed, at scale, and without further delay.

The EBA report "Biogases: Europe's overlooked path to energy independence" was published in April 2026 by Guidehouse, commissioned by the European Biogas Association. Harmen Dekker is CEO of the European Biogas Association.