

Biomethane Action Plan 2024-2040



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1. Framework

As a result of the impact on society of the repercussions of the COVID-19 pandemic and the geopolitical events in Ukraine, and in order to minimise it, the European Union ("EU") has ordered member states to introduce a chapter on the recent plan to reduce dependence on Russian gas and oil (REPowerEU) in their national recovery and resilience plans ("RRP"), promoting socio-economic cohesion. In this context, it was analysed that, according to REPowerEU, biomethane could replace up to 10% of the fossil natural gas consumed in EU by 2030. At national level, the industry associated with these gases is at an early stage, being essential an integrated strategy to promote its development. For this reason, Portugal has presented a set of investments and reforms under this REPowerEU chapter, with the aim of supporting its ambitions in terms of energy independence and ecological transition.

To promote the increased use of renewable gases in the country's decarbonisation process, with a special focus on industry and the transport sector, while promoting the circular economy and the recovery of waste, Portugal has approved a reform dedicated to promoting the production and consumption of sustainable biomethane, creating the necessary conditions for the development of a biomethane economy in Portugal.

The adoption of the Biomethane Action Plan 2024-2040 ("BAP"), approved by Council of Ministers Resolution no. 41/2024 published on 15th March, is one of the measures contemplated by the reform, and it is a step further in establishing commitments to guarantee the energy transition as a lever of competitiveness and to reduce greenhouse gas emissions in Portugal, all with a view to establishing the strategy for the development of this renewable gas in the country.

More specifically, BAP has a strategic vision of promoting the biomethane market in a sustainable way, decarbonising the national economy, reducing imports of natural gas used in the industrial and domestic sectors, including its use in mobility, and taking full advantage of the endogenous resources that exist in various sectors.

2. BAP's priorities and lines of action

BAP strategy envisages two phases, with different time horizons:

- In the first phase (2024-2026), BAP proposes measures to start producing and supplying renewable gas and to develop the biomethane market in Portugal through existing biogas production. Most of these actions should be implemented by the end of 2026 and are a priority;
- In a second phase (2026-2040), in addition to Phase 1, medium-term lines of action are presented, centred on consolidating the biomethane market in Portugal and increasing the scale of biomethane production.

In addition, there is a complementary axis (2024-2040), transversal to the use of biomethane at national level, which aims to guarantee the social and environmental sustainability of market growth and the active participation of society in the development of the sector.

The following set of BAP development priorities stand out, which are translated into specific lines of action (L):

BAP Summary		
Phase 1 (starting in 2024)	Phase 2 (2026-2040)	Transverse Axis (2024-2040)
Priority 1: Accelerate the development of biomethane production (L1 to L6)	Priority 3: Scale up biomethane production in Portugal (L9 to L11)	Priority 6: Ensure the sustainability of the biomethane sector (L18)
L1 Pursue a framework of support for biomethane production	L9 Encourage management entities in the wastewater sector to use and maximise anaerobic digestion of sludge	L18 Ensure sustainable utilisation of Portugal's biomethane potential
L2 Implement the selective collection of bio-waste and enable municipal waste management systems (SGRU) to maximise organic recovery through anaerobic digestion	L10 Scale up the organic valorisation of livestock and agro-industrial effluents in the biomethane production process	Priority 7: Stimulate and strengthen synergies between the actors in the value chain (L19 to L20)
L3 Encourage the conversion of existing biogas plants to biomethane and speed up the implementation of projects already approved and/or under development in the agricultural and agro-industrial sector	L11 Diversify the technological base for biomethane production beyond anaerobic digestion	L19 Raise awareness and train the national industry to harness the potential of biomethane in the main sectors of interest, using existing routes, clusters, and systems

BAP Summary		
Phase 1 (starting in 2024)	Phase 2 (2026-2040)	Transverse Axis (2024-2040)
L4 Set targets for incorporating biomethane into RPG	Priority 4: Develop and create value chains at regional level (L12 to L15)	L20 Integrate civil society and regional and local public administration bodies in the development of the sector and promote the participatory involvement of all players in the value chain
L5 Explore opportunities for biomethane in the transport sector and encourage biomethane consumption in industry, particularly in industries covered by the Energy Intensive Consumption Management System (SGCIE)	L12 Promote co-digestion of complementary raw materials without compromising environmental benefits	
L6 Carry out prospective studies for the strategic implementation of projects and assess the need for new connections to the current infrastructure for biomethane injection at regional level	L13 Encourage the creation of biomethane communities or virtual pipelines for the production of biomethane and its injection into the gas network	
Priority 2: Create an appropriate regulatory framework (L7 to L8)	L14 Encourage the creation of centralised collection solutions at regional level associated with biomethane communities or virtual pipelines to guarantee access to quality raw materials	
L7 Promote the injection of biomethane into the RPG	L15 Implement a strategy for digestate as a fertiliser material to enable the biomethane market to grow	
L8 Clarify the regulatory framework and streamline licensing processes	Priority 5: Strengthen and promote research and innovation (L16 to L17)	
	L16 Promote innovation in the value chain, including the valorisation of digestate, the valorisation of CO2 resulting from the biogas purification process and the use of alternative biomethane production technologies in different sectors of activity	
	L17 Strengthen the strategic assessment for the realisation of biomethane production and the use of biogenic CO2 by innovative technologies identified as having high potential	

As described above, BAP has 20 lines of action, with the aim to prepare and train Portugal to utilise biomethane, establishing a coherent and interconnected vision for developing biomethane production and consumption as quickly as possible.

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3. The main barriers to the development of biomethane market in Portugal

Without prejudice to the above, it's important to emphasise that BAP also signals difficulties of various kinds, namely:

- Economic - L1, L3, L13 and L17:
 - › Need to guarantee support for biomethane production; and
 - › Lack of investment from the private sector.
- Technological - L2, L12, L11 and L16:
 - › Sustainability of the value chain; and
 - › Unfamiliarity with the sector and a lack of publicity about the advantages of biomethane for the general public, fuelling the NIMBY phenomenon.
- Regulatory - L4, L6, L7, L8, L9, L10 and L14:
 - › Need for specific regulations;
 - › Promote the development of supply chains for raw materials; and
 - › The need to harmonise public policies.

However, BAP is still indispensable, not only for the implementation of public energy transition policies, which are crucial to the transformation of the national economy, but also for the fulfilment of a PRR framework assumed by Portugal.

This is why, in terms of timing, BAP's proposals are organised in a progressive but complementary way, with the measures considered to be more structural being implemented now, and with greater urgency. ^{CS'}