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Meeting Romania's Biomethane Moment

Nadia Maki

Op-ed, October 2025

The new biomethane ordinance is a step forward, despite a key drawback

The new draft emergency ordinance on the support of biomethane production is a real step towards the development of a biomethane market in Romania. It introduces a legal definition for biomethane producers and sets out their rights and obligations in alignment with that of natural gas producers. They are required to meet strict quality and safety standards to inject into the gas grid, secure the needed licence and ensure responsible facility operation. These conditions make it possible for Romania's first biomethane production facility to connect to the gas grid.

The ordinance will undoubtedly contribute to Romania's 5% biomethane target by 2030. However, it includes a contradiction which threatens to undermine the sector's growth. The ordinance requires natural gas producers and biomethane producers to be treated equally[1], despite different cost recovery mechanism allowances between the two kinds of producers. Natural gas producers are allowed to recover their investment in grid connections and upgrades through tariffs, while biomethane producers are deprived of this privilege, as detailed in Figure 1[2].

Biomethane producers must bear every cost of connection, injection facilities and related infrastructure and reinforcement costs, despite delivering chemically identical gas to the grid.

[1] Article 98 (2) amended 'provisions shall apply in a non-discriminatory matter to biogas, biomethane…insofar as it is technically possible for them to be injected or transported through natural gas transmission/distribution systems…'
[2] Article 151 (1) Biomethane producers shall bear all the costs of work…(a) for connection between production facility and downstream system objectives...(b) injection facility

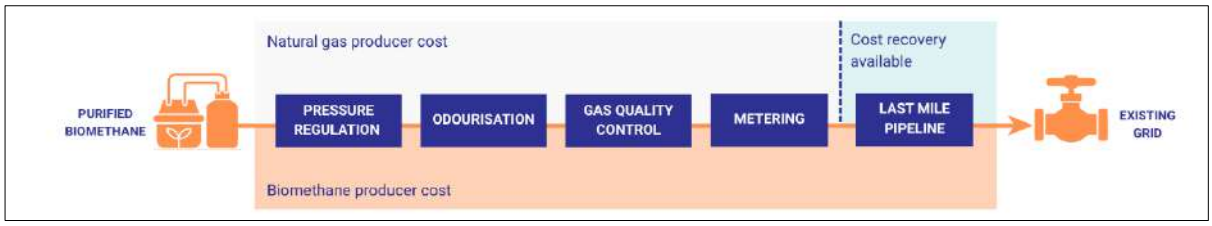

Figure 1. Cost sharing of DSO grid connection in Romanian law. Adapted from European Biogas Association (2024). EPG analysis for Romania.

Romania has some of the highest biomethane potential in the EU

Romania's gas distribution grid is extensive and could be adapted for renewable gas adoption. According to Romania's biomethane fiche published by the European Commission, the country has the technical ability to replace about a quarter of current natural gas imports with biomethane, representing a significant win for energy security and emissions reductions. Romania has an estimated 5.5 bcm of biomethane production potential by 2040 – one of the highest in the EU.

Romania's biogas production briefly rose to 30 MW and dropped again to 21 MW in 2023 while biomethane production has not yet begun. Biomethane production has multiple benefits: it supports job creation in rural areas, increased energy security in a decarbonised world and puts a price on waste products, which stimulates the circular economy. Therefore, asking investors to pay for connection to the gas grid undermines multiple strategic interests.

Cost sharing for grid connection is the norm across Europe

Sharing connection and reinforcement costs is common across Europe, because biomethane is viewed as serving a public purpose. The European Biogas Association (EBA) has identified common cost sharing mechanisms:

1. **'Divide-and-conquer',** where either the system operator or the producer assumes CAPEX responsibility and the other manages OPEX, as is the case in Estonia, Portugal and Luxembourg.
2. **Cost sharing at the component level,** where costs are divided by infrastructure elements, as is the case in the Netherlands and the Czech Republic.
3. **Percentage-based burden sharing,** with some limitations. For example, the German DSO pays 75% of the connection costs and the producer pays 25% for pipelines which are 10km and under. For short connection distances (sub 1km) the producer's contribution is capped at €250,000. In France, the grid operator pays 60% of the costs and the producer 40%, though the operator's contribution is capped at €600,000.

4. **Further support** can also come in the form of grid operators making the initial investment in grid connections, but slowly charging the producer the full amount over a long period of time, which can help reduce upfront investment costs.

Regardless of support type, the analysis shows that pressure regulation is most commonly within the responsibility of the biomethane producer while the cost of the last-mile pipeline (required to connect the producer to the closest grid) is shared or covered by the grid operator.

Comparable countries struggle without cost sharing

Clear patterns have emerged. Three of the top five countries with the highest biomethane potential (Germany, France and Italy) are also three of the top five countries with biomethane production. All three operate cost-sharing mechanisms of some form. The other two countries with high biomethane production potential, Spain and Poland, require all expenses to be covered by the producer, similar to what is being considered in Romania. Both remain limited in their production quantities, despite strong technical potential. Hence, the Romanian model of integral producer payment responsibility is self-defeating.

Furthermore, Germany, France and Italy all provide state support for the production of biomethane either through feed-in tariffs, supplier purchase obligations, auctions or in combination of two. Spain and Poland both lack comprehensive biomethane production support schemes, though new plans indicate upcoming feed-in premium plans in Poland. Romania might consider using the Modernisation Fund to develop of a support scheme for biomethane production, as it has successfully used this funding in the past to support onshore and solar PV production through the Contracts for Difference scheme.

Solutions can include pilot test zones or delivery thresholds

There are legitimate concerns around the costs of connecting biomethane plants to the grid. Biomethane derived from waste may be produced in smaller quantities, and production areas centred around feedstock availability which may not be ideal for grid connection. However, these challenges can be overcome with well-designed eligibility criteria, such as minimum delivery thresholds or delivery within pilot-tested zones, which seek to include as many biomethane sources as possible while protecting grid efficiency.

The simplest solution may be to treat biomethane producers the same as natural gas producers and allow them to access cost recovery mechanisms.

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Meeting Romania's targets requires collaboration and support

The EU's hydrogen and gas market directive demands fair treatment for renewable gases in supply, transport and injection. The recent revision of the National Energy and Climate Plan (NECP) foresees 4.27 TWh of biomethane consumption by 2030, matching the 2030 5% target blending rate in the Energy Strategy, which will grow to 10% by 2050. These targets rely on agricultural residues and organic waste becoming integral sources of renewable gas.

The Energy Law already defines gas transport as a public service and the same logic should also apply to renewable gas. To a certain extent, any gas production functions through collaboration between the private sector (production) and the public sector (state ownership of grid infrastructure). Confidence in this collaboration is undermined by policy inconsistencies and can affect investor confidence and deterring the substantial CAPEX needed to meet biomethane targets.

Now is the time to set rules which match both domestic energy strategy and our European commitments to ensure renewable gas flourish within Romania.