

The Potential of Ukraine-EU Biomethane Cooperation

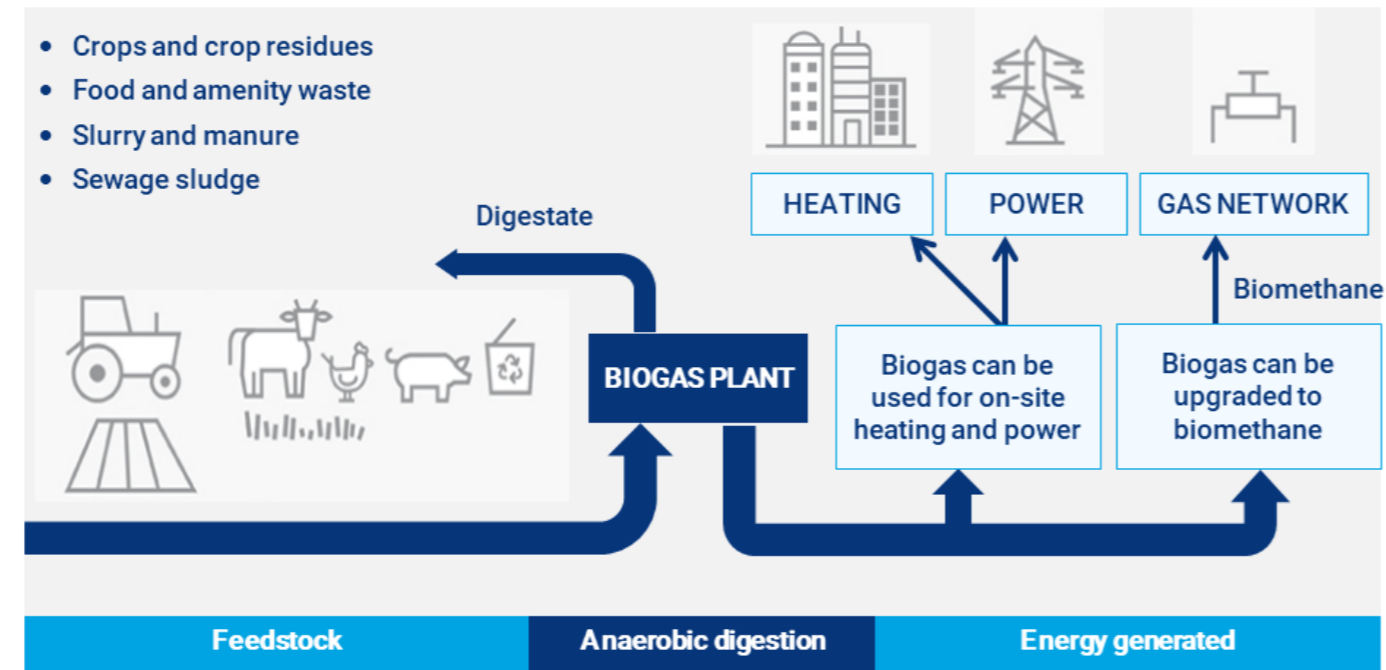
Maciej Zaniewicz, 13.02.2025



© Copyright [Chris Allen](#) and licensed for [reuse](#) under this [Creative Commons Licence](#)

BIOMETHANE - SUSTAINABLE, NON-RUSSIAN ALTERNATIVE TO NATURAL GAS

Typical process for biomethane production



- **80% lower carbon footprint** than natural gas
- **adding value** by economically disposing of (agricultural) waste.
- biomethane helps to **reduce the dependence on imports**, especially of Russian natural gas.



● ● EU WANTS MORE BIOMETHANE, TO REPLACE RUSSIAN GAS...

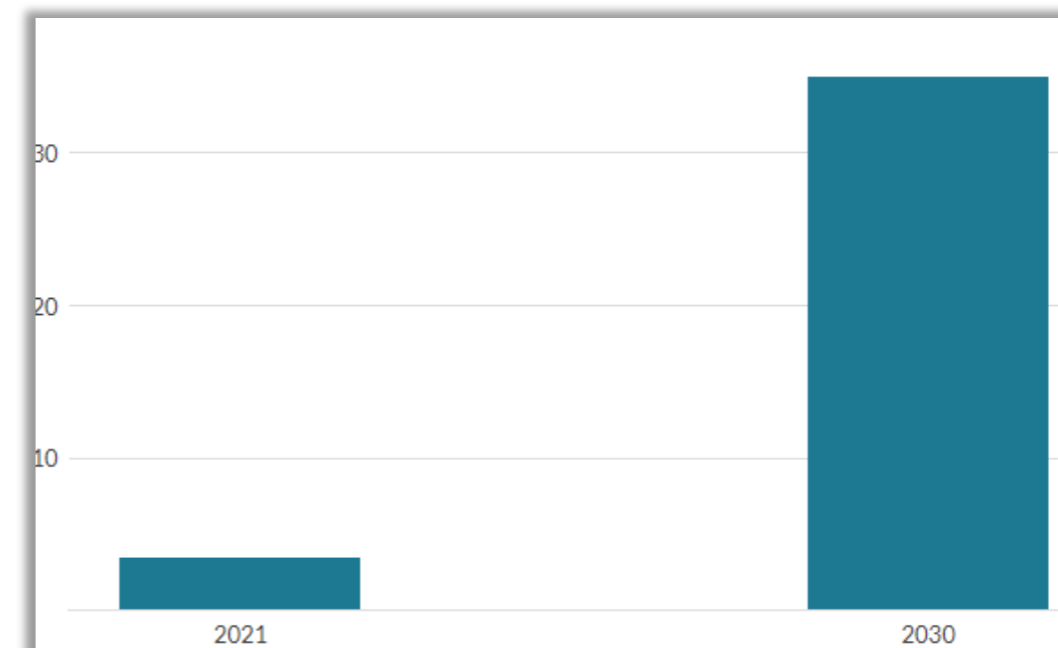
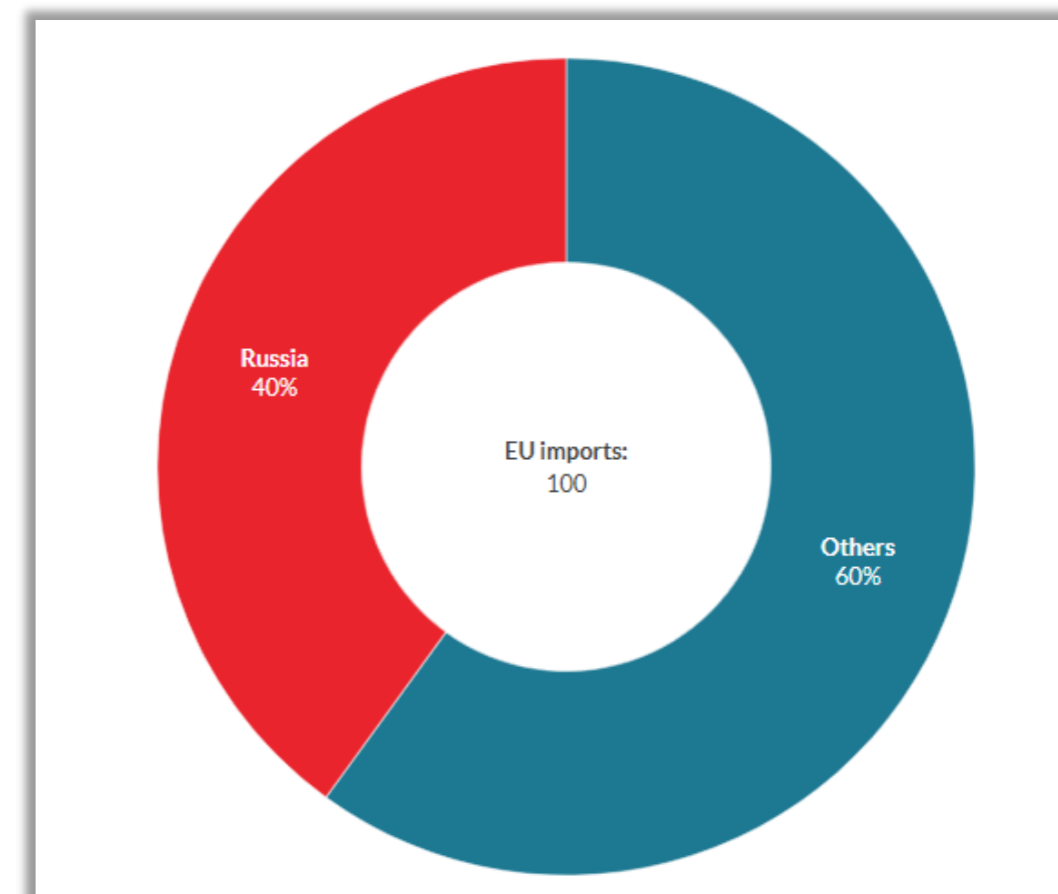
REPowerEU (2022)

- Reduce the use of Russian gas

In 2022 accounted for 40% of EU imports

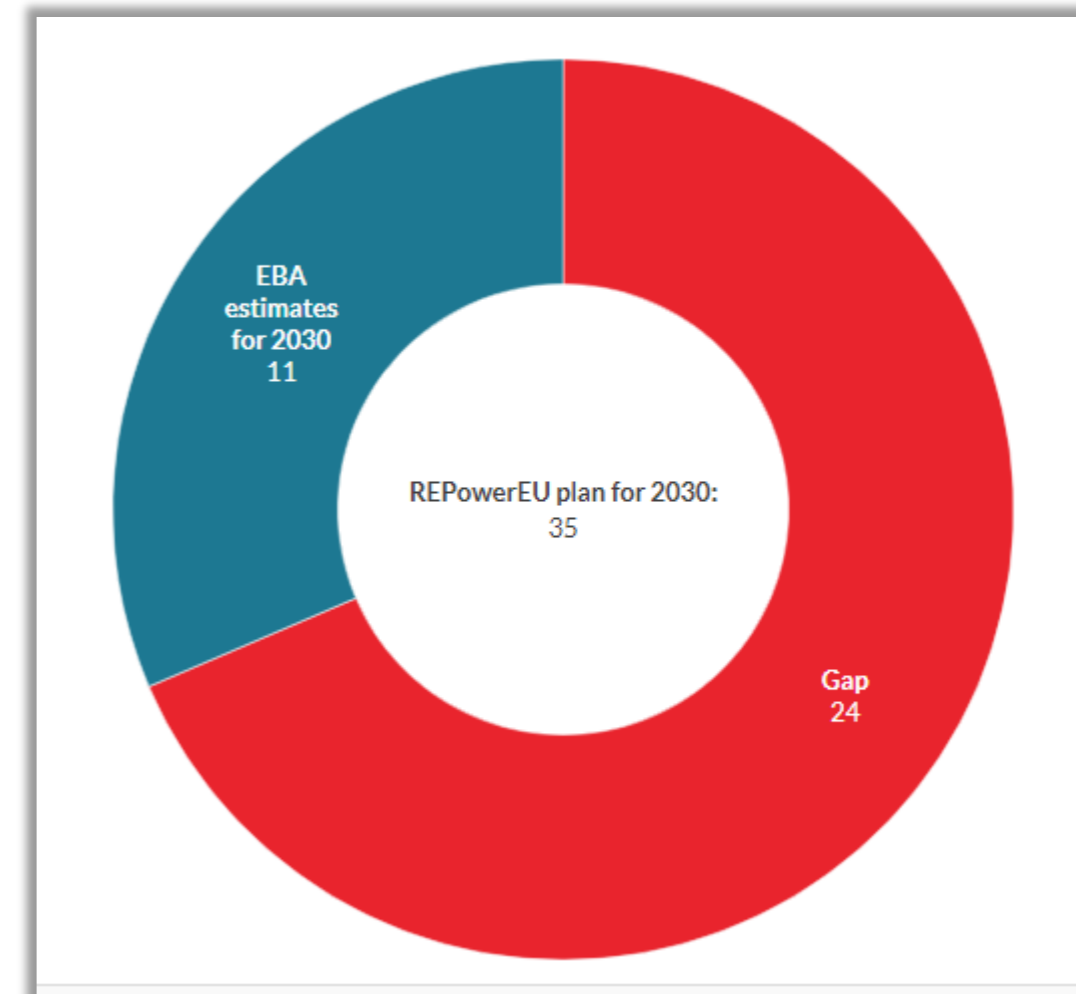
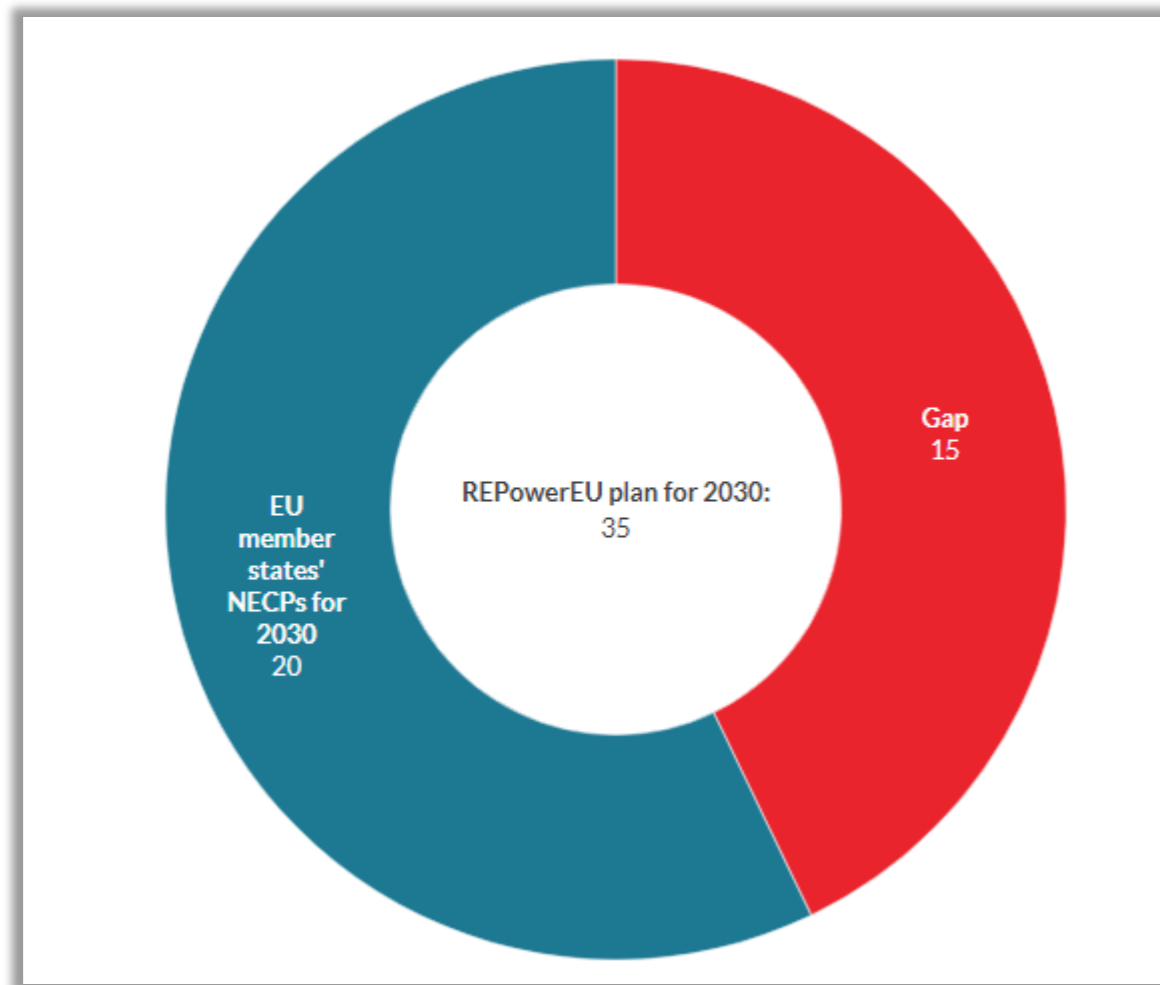
- Increase in biomethane production in the EU

3.5 bcm in 2021 to 35 bcm in 2030



● ● ...BUT IT IS HARDLY POSSIBLE

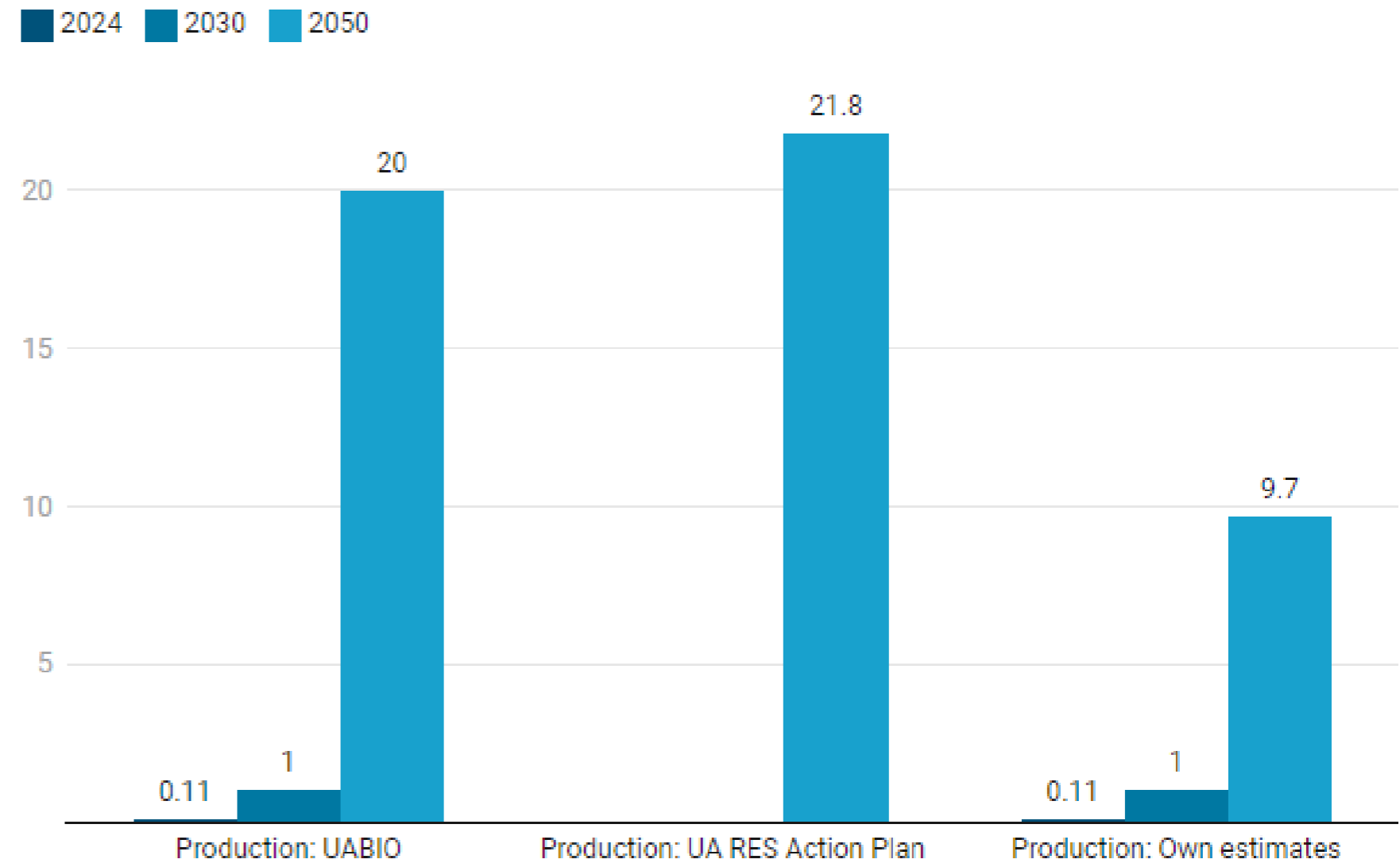
Gap between REPowerEU target and expected biomethane production in 2030 will be as high as **15 - 24 bcm**.



PRODUCTION POTENTIAL – UNCLEAR, BUT SUBSTANTIAL

- 1 bcm by 2030
- 5.9 to 21.8 bcm by 2050
- Plants will mostly be connected to the distribution network.
- Biomethane will be physically consumed on site.
- Exports to the EU through swap-type operations.
- Due to limitations of the distribution network, **the production potential by 2050 is 10 bcm.**

Biomethane production potential in Ukraine [bcm/y]

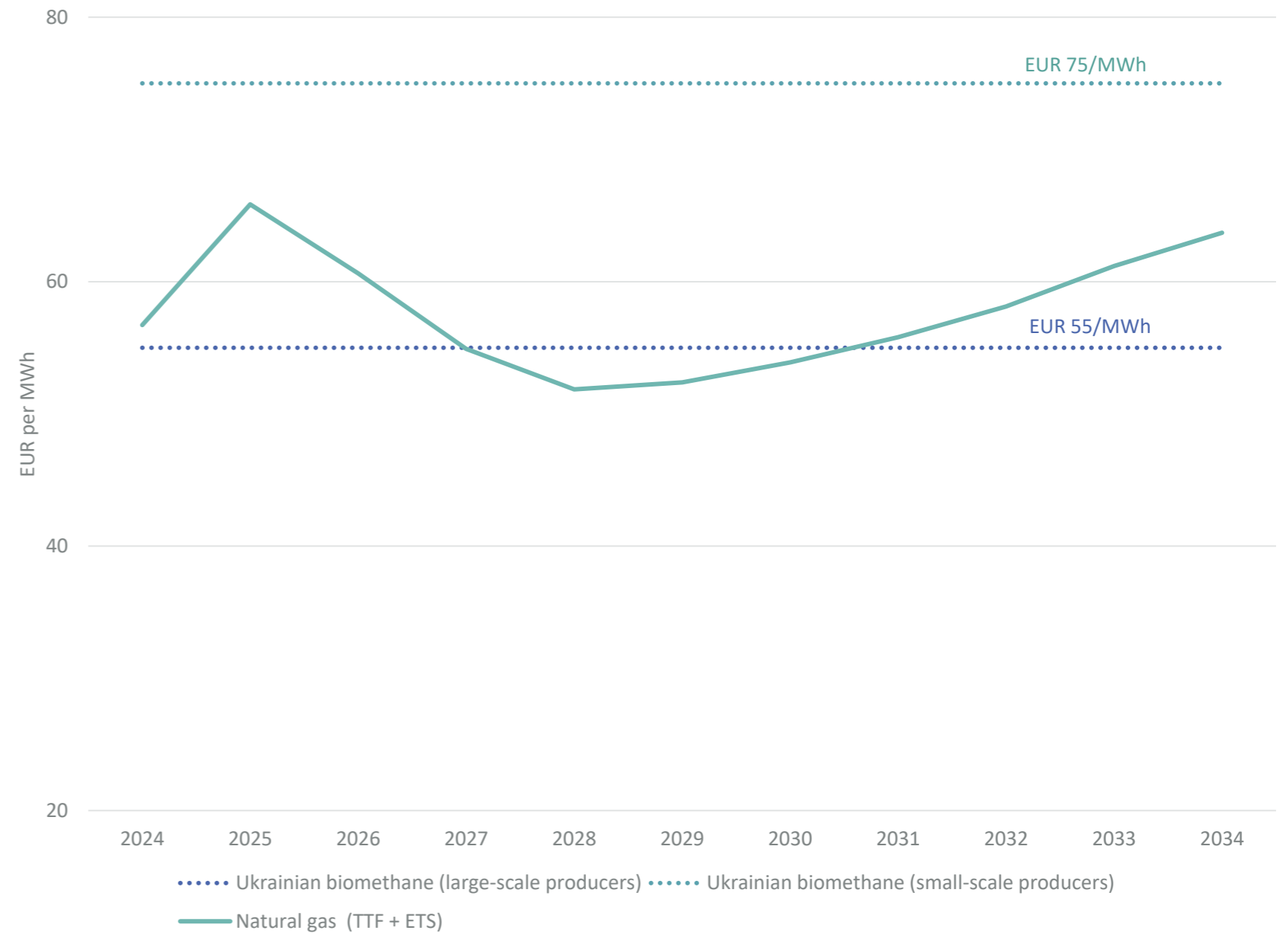


Source: UABIO, Ukrainian RES Action Plan until 2030, own estimates

UKRAINIAN BIOMETHANE IS ALREADY PROFITABLE IN THE EU



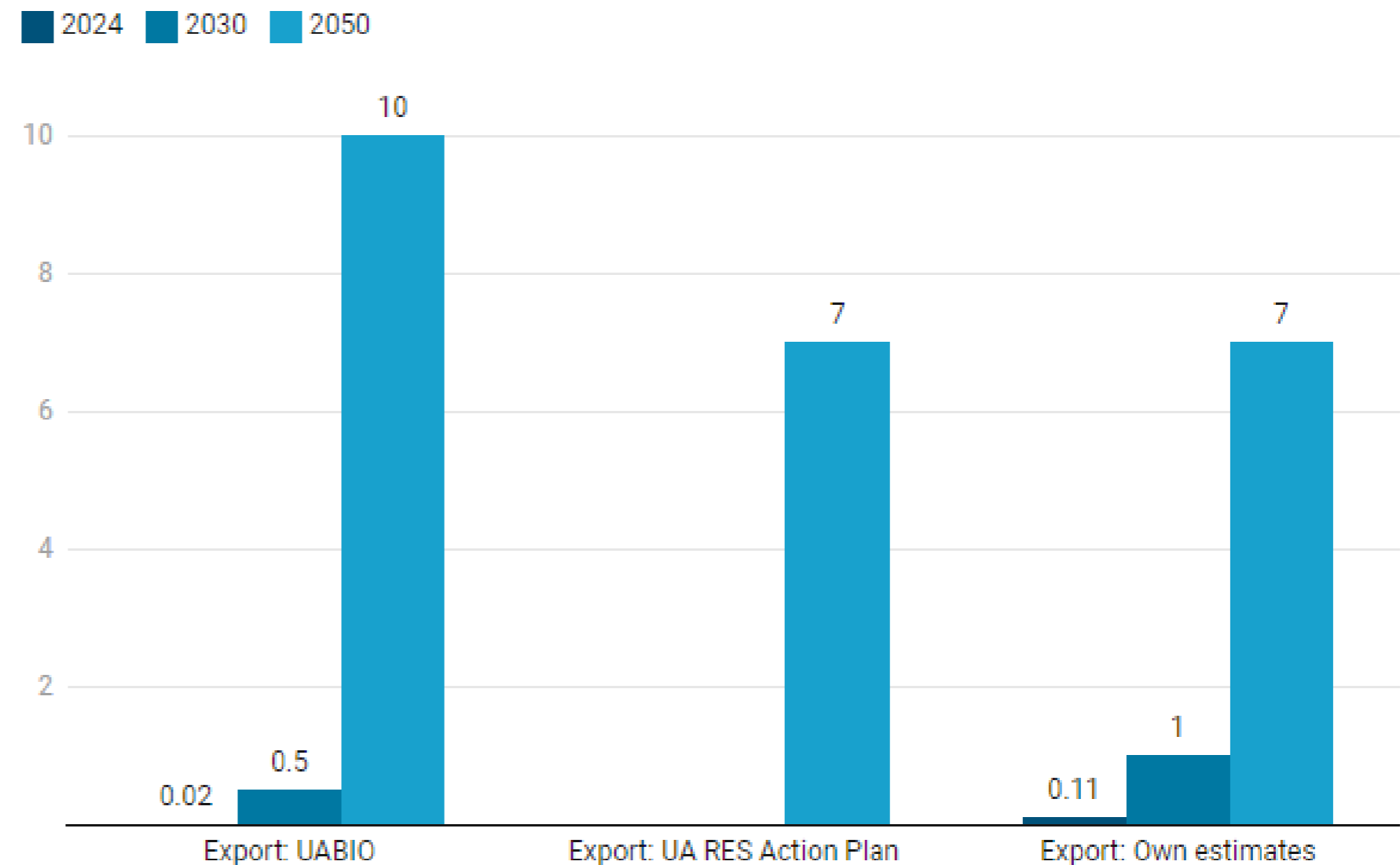
- Profitability depends on: feedstock cost, CAPEX, scale, ETS price, natural gas price in Ukraine and EU, offers from other EU and non-EU producers...
- Ukrainian biomethane is **already profitable on the EU market***.
- Conditions for the large-scale biomethane imports from Ukraine are not expected until the 2030s.



UKRAINE CAN COVER (A BIT) THE EU PRODUCTION GAP

- 1 bcm of biomethane to the EU by 2030 (and 7 bcm until 2050)
- **6% of the EU 2030 biomethane gap** (REPowerEU vs NECPs)
- To unlock this potential, low-cost regulatory measures are needed first.
- Biomethane from Ukraine – **not a "silver bullet" for EU, but important element of a diversification policy.**

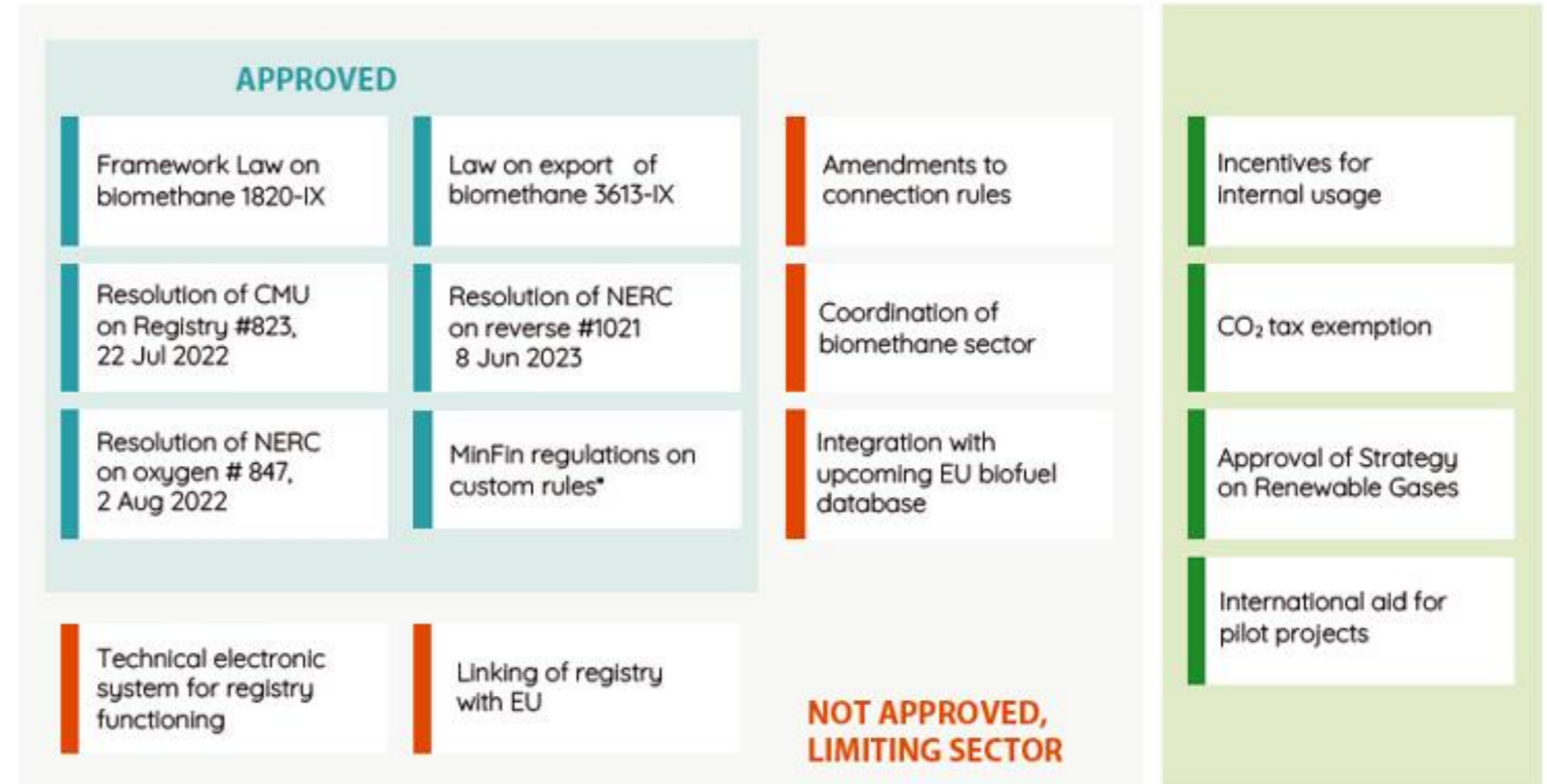
Biomethane export from Ukraine to the EU forecasts [bcm/y]



Source: UABIO, Ukrainian RES Action Plan until 2030, Own estimates

- Reliable, up-to-date and comparable **data** for all EU Member States.
- **Strategic thinking - biomethane strategy.**
 - **3 pillars:**
 1. **local dimension;**
 2. **intra-EU cooperation;**
 3. **cooperation with candidate countries**, especially with Ukraine.
 - It should demonstrate how biomethane can contribute to:
 1. **energy transition in the power sector and hard-to-electrify industrial sectors;**
 2. **achieving climate goals;**
 3. **transforming agriculture.**
- **Effective information policy**
- **Clear quantitative and qualitative requirements for imports** from third countries.

- Simplify **connection procedures**
- Simplify **payment** for injection and transmission
- Adjust **quality requirements** for biomethane injected into the grid
- Create a **Bioenergy Strategy** and focus oversight
- Eliminate **carbon tax** on biomethane
- Establish **monitoring procedures** and a certified monitoring body



1. **Not a game changer** - 1 bcm by 2030 is realistic (about 0.3% of EU methane demand).
2. **Profitable for the EU** if we want to decarbonise gas.
3. **Doesn't hurt the EU biomethane sector** - the alternative to imports from Ukraine is not biomethane production in the EU, but natural gas imports.
4. **Profitable for Ukraine** - the sector will not develop based on domestic demand alone - the alternative to exports is not domestic consumption, but the lack of development of the industry in Ukraine.
5. **Doesn't postpone decarbonisation in Ukraine** – Without export to the EU, it will not decarbonise gas anyway.
6. **Possible** - there are no infrastructure barriers
7. **Needs work** - harmonisation of standards for the EU, allowing imports to the UDB

The Potential of Ukraine-EU Biomethane Cooperation

Authors: Anna Bohushenko, Oleksii Epik, Dmytro Naumenko, Agata Łoskot-Strachota, Georg Zachmann, Maciej Zaniewicz (ed.)



Supported by:



on the basis of a decision
by the German Bundestag

