
Prospects of biomethane in Ukraine

Georgii Geletukha,
Doctor of Sciences (Engineering)
Head of the Board,
Bioenergy Association of Ukraine
(UABIO)



Co-funded by
the European Union

innovations in the
BIOMETHA^{ne}
uni**VERSE**

UABIO

Bioenergy Association of Ukraine – non-profit civic union, that unites business and experts for sustainable development of bioenergy in Ukraine

12

years

50

companies



Biogas/biomethane in Ukraine (2024)

Parameter	Biogas	Biomethane
Installed capacity, MWe	140 (33 MW for LFG)	6 mill m³/year
Number of plants	83 (33 for LFG)	2
Gas networks (km)	33 400	
CNG refilling stations	~ 300	

- The individual projects ranged from **125 kW_e** to **26 MW_e** installed capacity.
- **A wide range** of industries and different types of **feedstock**
- **First biomethane project** has been constructed in April 2023 on the base of existing biogas plant



We are not newcomers!



Why biomethane?

- Biomethane is completely ready for injection into the gas network. There is no need for investments in the NG networks (GTS and GDS) and gas equipment (gas burners, engines, turbines, ...) to adapt for gas quality.
- Today, biomethane is the cheapest renewable gas.
- Biomethane plants, in addition to biomethane, generate digestate, that can be the main organic fertilizer for the revival of Ukrainian soils.

Why in Ukraine?

- Ukraine has the largest area of agricultural land in Europe, and, accordingly, one of the best agricultural feedstock potentials for biomethane production in the world.
- Ukraine can offer the cheapest feedstock for the production of biomethane and compete with any countries on the biomethane market.
- Ukraine has developed system of NG networks (GTS and GDS).
- The structure of agricultural enterprises is favorable for biomethane production (big share of large- and medium-sized enterprises).
- The possibility of exporting biomethane to the premium EU market adopted ambitious plans for the production of biomethane (REPowerEU): **35 billion m³/year in 2030**.
- Ukraine can potentially provide up to **20%** of EU biomethane demand till 2050.

Ukraine has ideal conditions for biomethane production!



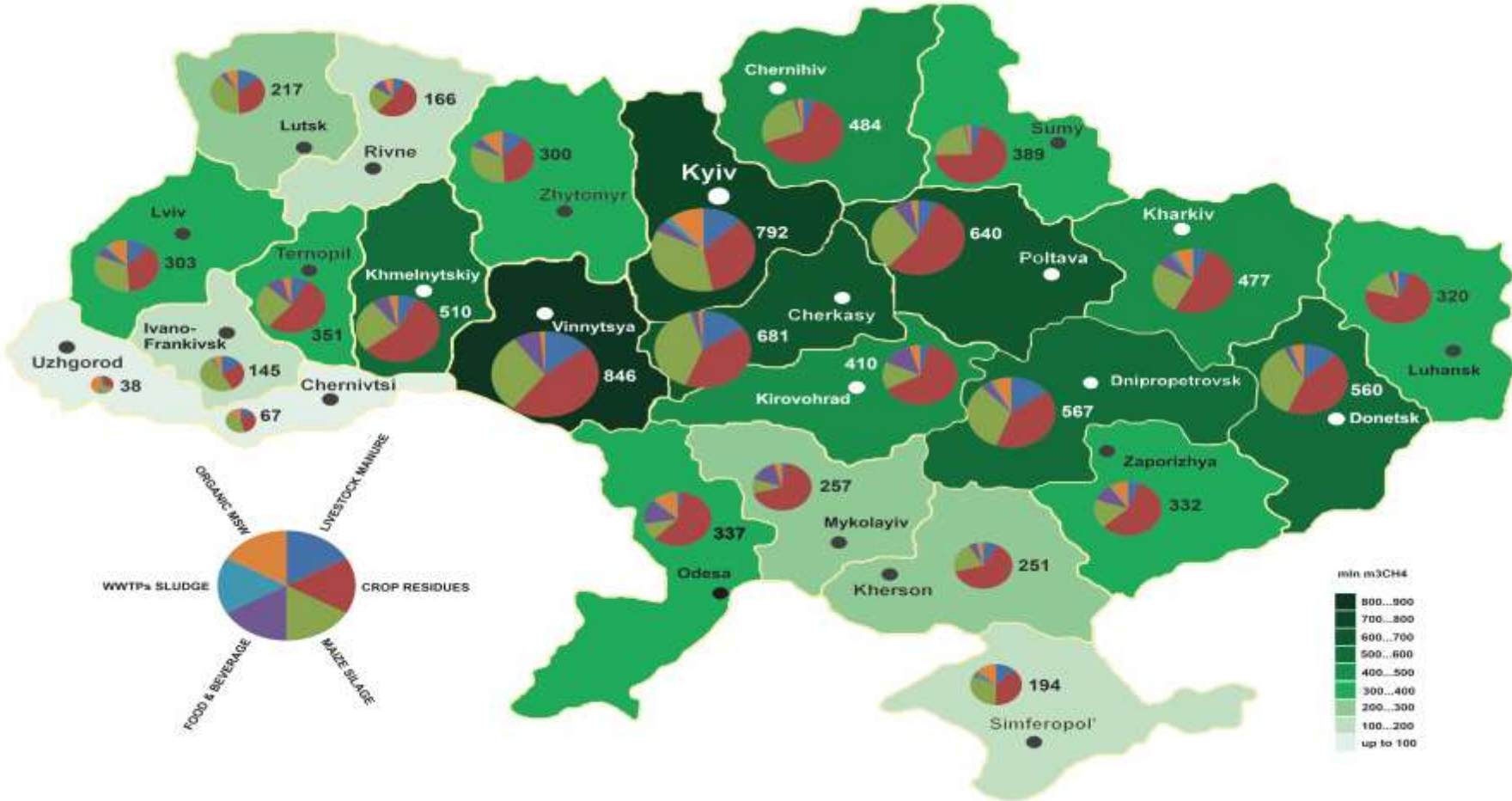
Biogas/biomethane production potential in Ukraine

BIOGAS/BIOMETHANE, billion m ³ CH ₄ /year	
Biogas from animal waste	0,9
Biogas from harvest residues of agricultural crops	5,2
Biogas from by-products of the food processing industry	0,7
Biogas from municipal solid waste (MSW)	0,5
Biogas from municipal waste water treatment plants	0,1
Energy crops: biogas from corn silage (from 1 million hectares)	3,8
Biogas from cover crops (20% of arable land)	9,8
Biogas from biomass obtained by thermal gasification (10%)	1,0
TOTAL BIOGAS/BIOMETHANE, billion m³ CH₄/year	21,8

We have biggest biomethane potential in EU!



Regional structure of biomethane potential in Ukraine



Most of biomethane can be produced in the central part of Ukraine!



Basic legislation implemented in Ukraine for development of biomethane sector

[Law of Ukraine "On Amendments of some Laws of Ukraine regarding the development of biomethane production"](#)
[№ 1820-IX from 21.10.2021 p.](#)

Definition of the term "**biomethane**", establishment of the **biomethane register** and the **GoO system for biomethane**.

[Law of Ukraine "On state support of investment projects with significant investments in Ukraine"](#)
[No. 3311-IX dated August 9, 2023](#)

For projects on production of bioethanol, **biogas and biomethane** with total investments **more than 12 mill Euro**:

- 1) exemption from payment of **certain taxes and fees**;
- 2) exemption from **import duty taxation** of new equipment and accessories for it;
- 3) the **predominant right to land use** of state or communal property;
- 4) provision at the expense of **budget funds for the construction of engineering and transport infrastructure** or compensation for such construction;
- 5) compensation of costs for **connection to engineering transport networks**;
- 6) exemption from compensation for forestry production losses.

[The Procedure of the functioning of the Biomethane Register](#) was adopted by the Resolution of the Cabinet of Ministers of Ukraine in July 2022 (Decree #823).
[NEURC \(the Regulator\) amendments on 8 June 2023 to a number of its resolutions aimed at supporting the development of the biomethane sector in Ukraine](#)

The concept of a **Reverse Flow Compressors** has been introduced.

[Law of Ukraine "On amendments to the Customs Code of Ukraine and other laws of Ukraine regarding the peculiarities of customs control and customs clearance of certain categories of goods"](#), [3613-IX](#) from 20.03.2024.

Legislation is fully in place!



Biomethane projects planned for launch in Ukraine in 2024

N	Company	Location	Capacity, million m ³ /year	Connection	Sustainability certificate
1	Hals Agro LLC	Chernihiv region	3.0	GDN	ISCC
2	VITAGRO group of companies	Khmelnyskyi region	3.0	GDN	ISCC
3	"Theofipol Energy Company" LLC	Khmelnyskyi region	56.0	GTN	ISCC
4	Hals Agro LLC	Kyiv region	3.0	GDN	
5	"YUM LIQUID GAS" LLC	Vinnytsia region	11.0	Bio LNG	
6	MHP	Vinnytsia region	24.0	Bio LNG	ISCC
7	MHP	Dnipropetrovsk region	11.0	GDN	ISCC
	TOTAL		111.0		

First projects are ready to start!



UABIO optimistic scenario of Ukrainian biomethane market until 2050

	2027	2030	2035	2040	2045	2050
Production of biomethane, bcm/y	0,25	1,00	2,1	4,5	9,5	20
Export of biomethane, bcm/y	0,13	0,50	1,05	2,25	4,8	10
Consumption in Ukraine, bcm/y	0,13	0,50	1,05	2,25	4,8	10
Number of biomethane plants, units	50	200	420	900	1900	4000
Necessary investments, billion €	0,5	2,0	4,2	9,0	19,0	40
Reduction of GHG emissions, mill t of CO ₂ -eq./y	0,6	2,5	5,3	11,3	23,8	50
Created new jobs, thousand units	3,1	12,5	26,2	56,2	118,7	250

We have ambition plans!



Thank you!

geletukha@uabio.org

www.uabio.org

Follow Biomethaverse:

www.biomethaverse.eu



[@European_Biogas](https://twitter.com/European_Biogas)



[@European Biogas Association](https://www.linkedin.com/company/european-biogas-association/)



Coordinator: Stefano Proietti,
ISINNOVA

Email: sproietti@isinnova.org

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.



Co-funded by
the European Union