

BIOGAS MARKET IN POLAND

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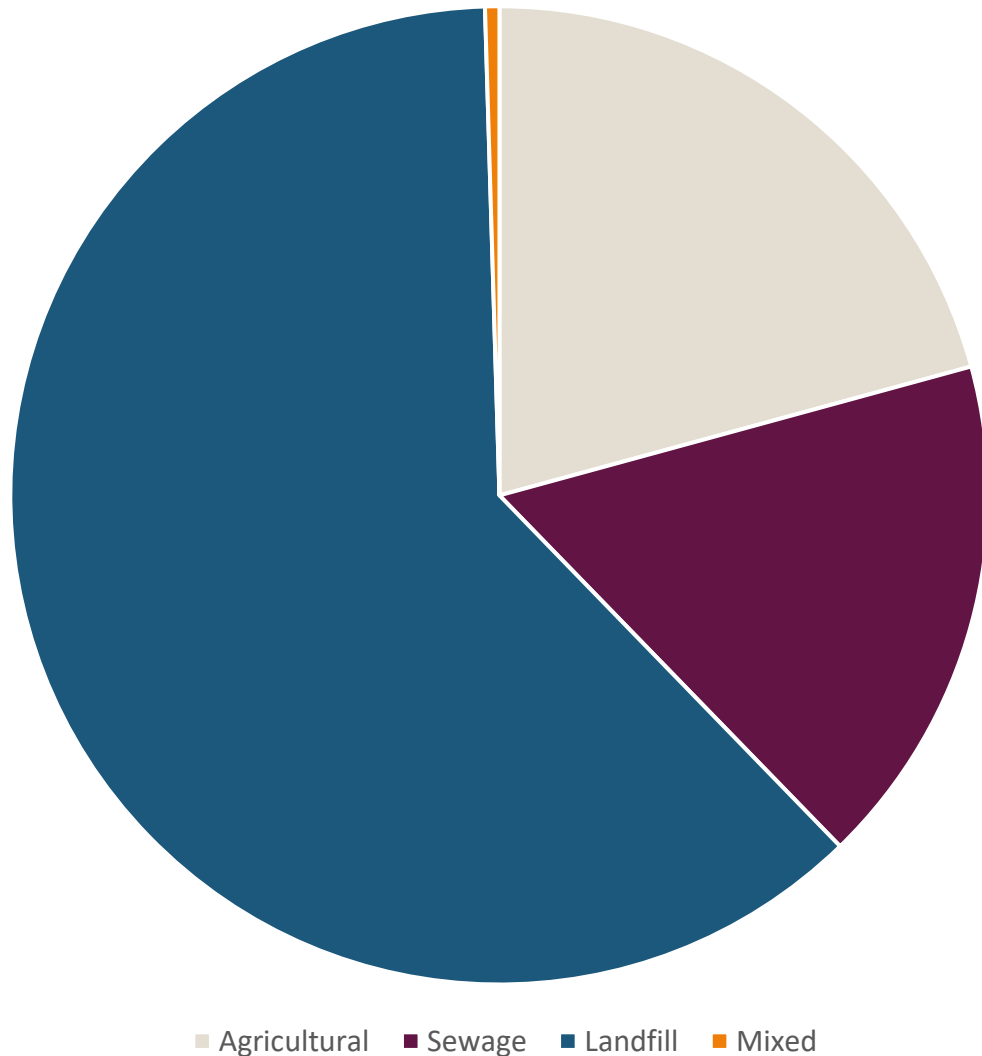
THE POTENTIAL OF THE BIOMETHANE MARKET IN POLAND

- The national **potential for biomethane** production is around **8 billion m³/year in total**.
- It is assumed **in Poland that by 2030 the demand** for biomethane **in transport** should be considered **at the level of 1 billion m³/year** (in physical or virtual supply), including:
 - - 700 ÷ 800 million m³/year for **refineries**;
 - - 200 ÷ 300 million m³/year for direct use in **transportation (Bio-LNG)**.
- After biogas treatment (biomethane of natural gas quality), it can be injected into the TSO's gas network.

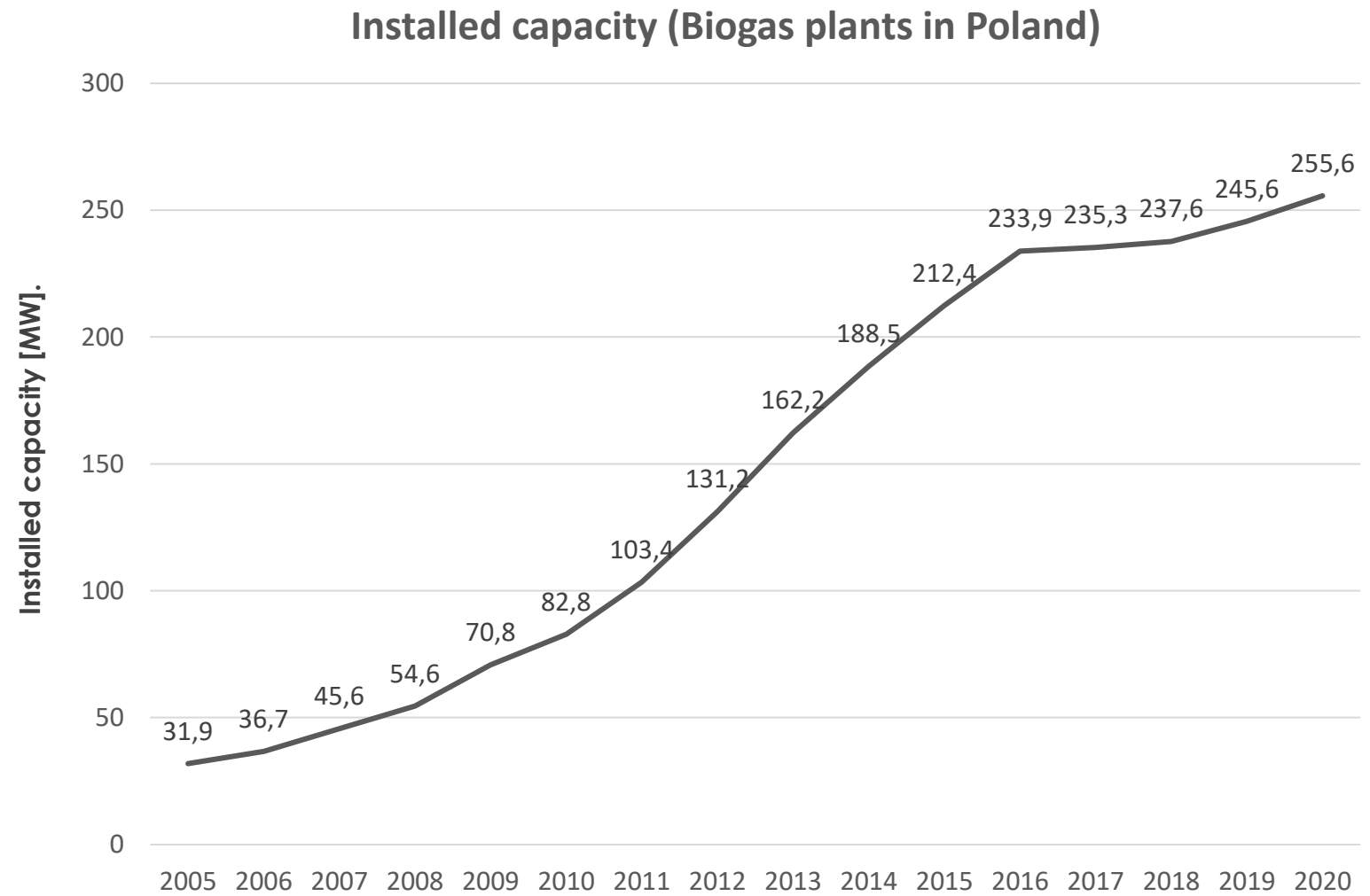
BIOGAS AND BIOMETHANE MARKET IN POLAND (2021)

Poland has over **636 biogas plants** including:

- **agricultural biogas plants** (132 installations),
- **biogas plants at a sewage treatment plant** (over 108 installations),
- **biogas plants at landfill** (393 installations),
- **mixed biogas plants** (3 installations).

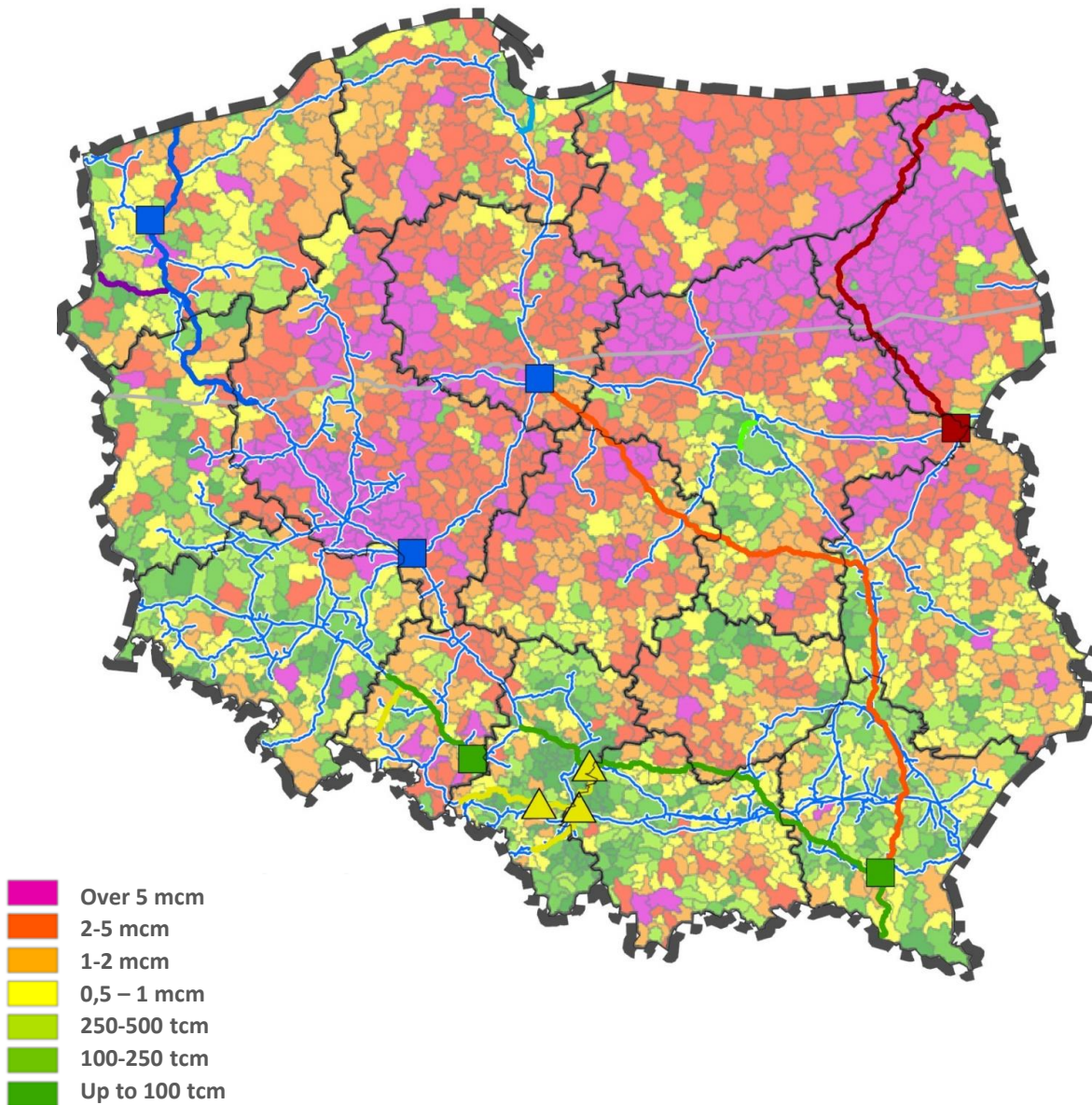


INSTALLED CAPACITY IN MW (BIOGAS PLANTS IN POLAND)



Source: Energy Regulatory Authority

POTENTIAL DEVELOPMENT OF BIOGAS IN POLAND



- Biomethane production **could be up to 8 bcm/year in the future.**
- The Polish Oil and Gas Company **assumes that up to 4 bcm/y of biomethane over the next 10 years will** be injected into the distribution grid and used for transportation.
- GAZ-SYSTEM assumes that by 2030 the amount of biomethane produced in Poland will reduce the amount of gas transported in the transmission network by **2.1 bcm/y equivalent of 10% current transmission**

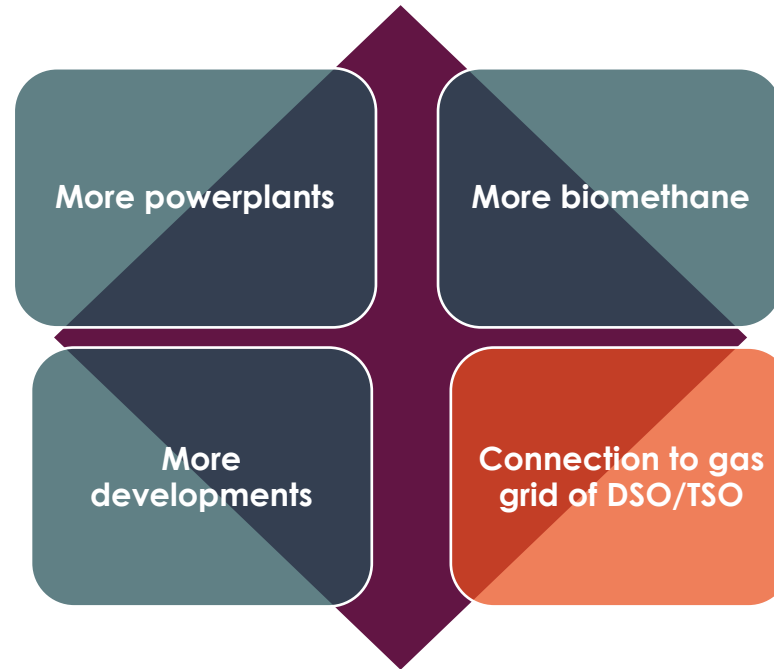
POTENTIAL DEVELOPMENT OF BIOGAS IN POLAND

- At the end of 2021 approx. **636 biogas plants** in Poland were put into operation
- **None of the biogas plants is currently connected** to the **TSO** or **DSO network**
- **In 2021 five applications for connection have been submitted to GAZ-SYSTEM**, with assumed biomethane rendering volumes oscillating in the range of $100 \text{ m}^3/\text{h} \div 1200 \text{ m}^3/\text{h}$. **The dialogue with biogas plants is ongoing**



OPPORTUNITIES FOR BIOMETHANE MARKET DEVELOPMENT IN POLAND

Investing in large-scale biogas-to-biomethane treatment plants



Next steps in order to inject biomethane to the Polish gas grid:

- National / EU support system for grid connection investments.
- Development Plan for expansion of the gas network on the side of the DSO/TSO that would allow to inject gas to the gas network of the DSO / TSO.
- Legal background and requirements for powerplants / DSO /TSO
- Dedicated financial instruments
- Unified certification system allowing for efficient biomethane trade

Thank You for the attention

