REGATRACE

Renewable Gas Trade Centre in Europe

The European Biomethane Market

Attila Kovacs/Flore Belin
ERGaR

2nd October 2020

This project receives funding from the European Union's Horizon 2020 Framework Programme Research and Innovation under Grant Agreement no. 857796

EU energy/climate political framework

- **European Council: resolution on climate change (12th December 2019)**

*"In the light of the latest available science and of the need to step up global climate action, the European Council endorses the objective of achieving a **climate-neutral EU by 2050**, in line with the objectives of the Paris Agreement."*

- The 2030 targets of the prevailing framework (RED II and NECPs) are not sufficient, must be revised.
- Revision is necessary also regarding renewable gases: the present framework does not provide for the needed expansion and does not create a quantifiable future market for renewable gases,

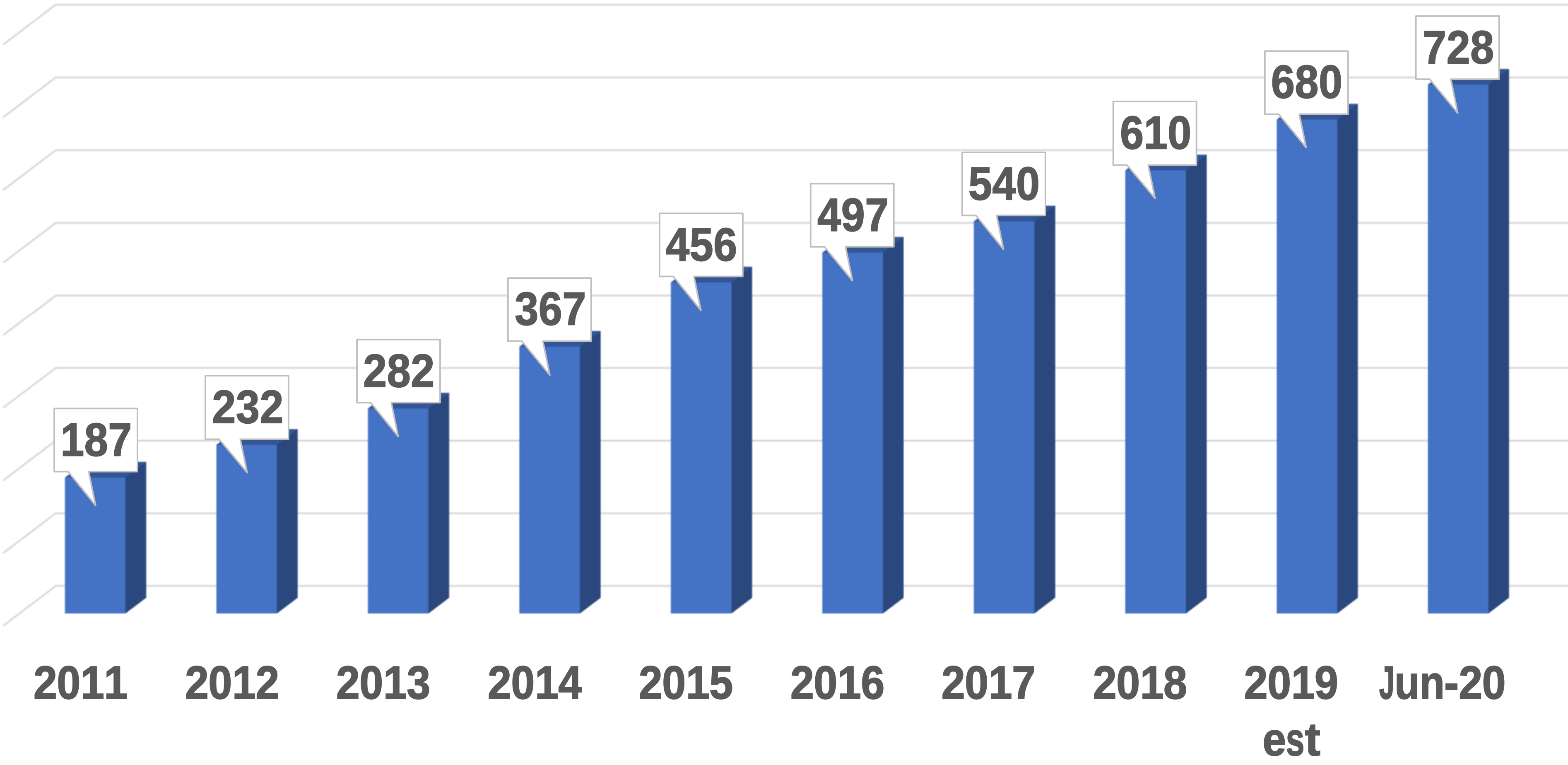
Increased importance of renewable gases in EU energy and climate politics?

The EC is suggesting to accelerate the clean energy transition and to revise the RED II

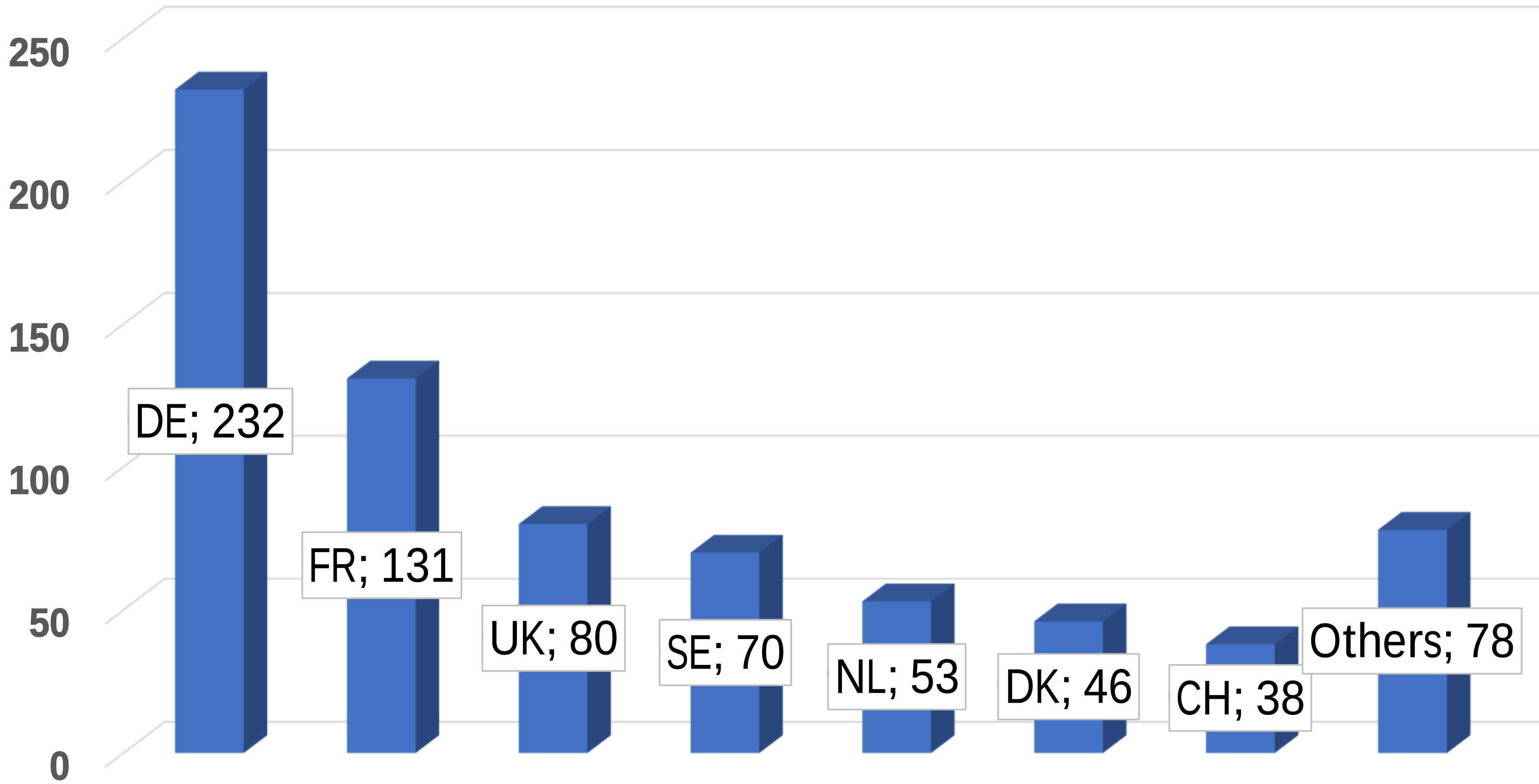
- to increase the 2030 GHG emission reduction target to 55% (from 40%)
- to increase the 2030 share of renewables in the gross final energy consumption to 38-40% (from 32%)
- to acknowledge the important role of the gas grid in providing flexibility in energy supplies (characterised with up to 70% renewable share in electricity generation).

European associations (Eurogas, EBA, ERGaR) are suggesting to introduce mandatory minimum share of renewable gases in the total gas consumption.

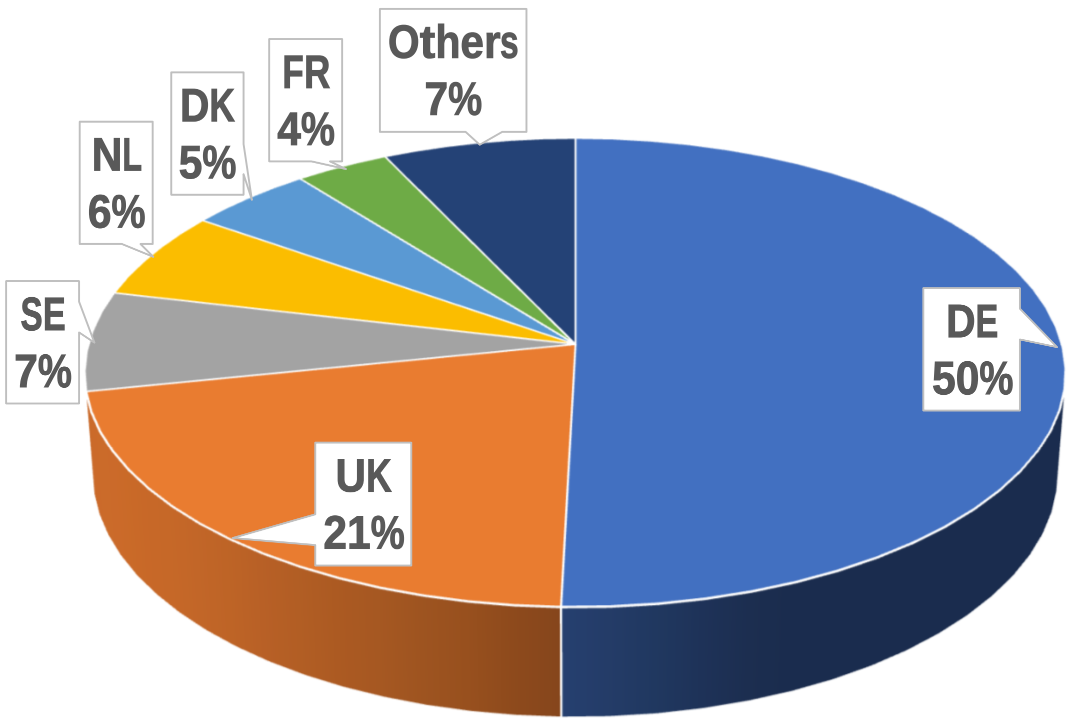
Number of biomethane producing plants (2)



Number of biomethane producing plants (2)



Shares in biomethane production (1)



Total biogas 2018 estimated:

abt. **22,0 bcm**

Total biomethane 2018 (2):

2,28 bcm

Number of biomethane producing facilities (2) (EU+CH+NO): **728**

Average size: **400 m³/h**

Highlights

FR: 131 operating biomethane units (2) - thanks to the FiT system

UK: remarkable investment activity until the revision of the FiT under RHI, new biomethane projects focusing on RTFO/RTFC

IT: 19 new biomethane units commissioned in 16 months – the impact of the attractive financial support scheme (3)

DK: strong development under FiP, biggest biomethane GO exporter

DE: mainly green electricity generation but transport fuel use is growing (GHG quota obligation on fuel suppliers)

SE: biomethane share in gaseous transport fuel supplies: abt. 94% (4)

CH: biomethane/natural gas blends supplied for heating consumers

Biomethane support schemes stopped/revised

The biomethane support schemes are stopped/revised:

- **IT**: the biomethane support scheme ends December 2022,
- **NL**: the SDE+ scheme is stopped effective end 2019, SDE++ started with focus on GHG emission reductions
- **DK:** the biomethane support for new installations is stopped effective 01 January 2020,
- **FR**: FiT scheme is stopped, new, tender based FiP scheme will be introduced,
- **UK**: RHI is applied for installations completed before 31 March 2021.

On the positiv side: promotion by tax benefits (CH, SE), by mandatory GHG redustion quota in transport fuel supplies (DE), by the RFTO/RTFC system (UK) are continued

Ways of biomethane trade

1. **Direct physical deliveries in tanks compressed or liquified (road, rail, water)** – *the administration is the same as for liquid biofuels*

2. **Physical deliveries in natural gas pipelines** – *following the rules and procedures of natural gas transport/transit*

3. **Virtual transfer of renewable value by means of Guarantees of Origin (GoOs) –** *regulated in Article 19. RED II,* ***paper*** *market*

4. **Mass-balancing in the natural gas network –** *the ERGaR concept of cross-border biomethane administration for establishing the* ***commodity*** *market*

Biomethane cross-border trade

REGATRACE
Renewable Gas Trade Centre in Europe

- Biomethane GO trade volume: < 10% of total production (5)
- Direct physical export volume: < 2% of total production, mainly transport fuel to UK (6)
- Main exporting countries: DK, UK
- Main importing countries: SE, CH
- Small scale movements both direcions: DE, NL
- FR: closed for cross-border transactions
- IT: domestic transport fuel consumption – no exports

RED II on share of advanced biofuels and biogas

Article 25. Para 1/b Within the minimum share referred to in the first subparagraph, the **contribution of advanced biofuels and biogas** produced from the feedstock listed in Part A of Annex IX as a share of final consumption of energy in the transport sector shall be

- **at least 0,2 % in 2022,**
- **at least 1 % in 2025 and**
- **at least 3,5 % in 2030**.

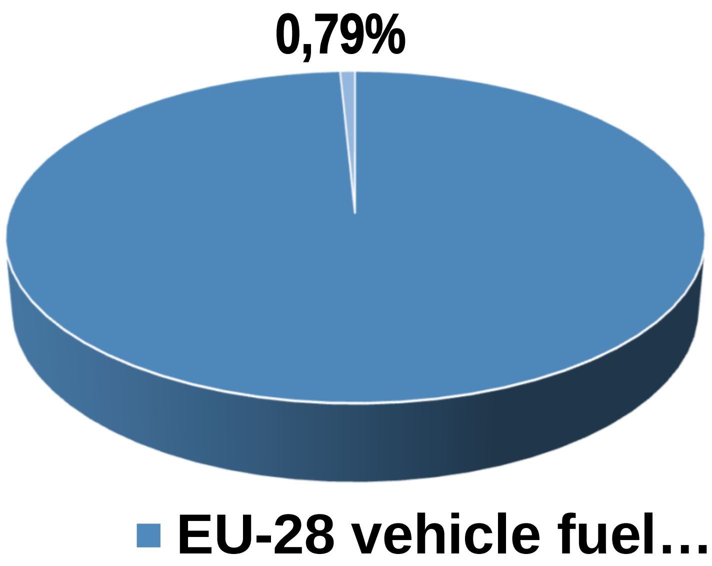
Article 27. Para 2. For the purposes of demonstrating compliance with the minimum shares referred to in Article 25(1):

- (a) the share of biofuels and biogas for transport produced from the feedstock listed in Annex IX may be considered to be **twice** its energy content;

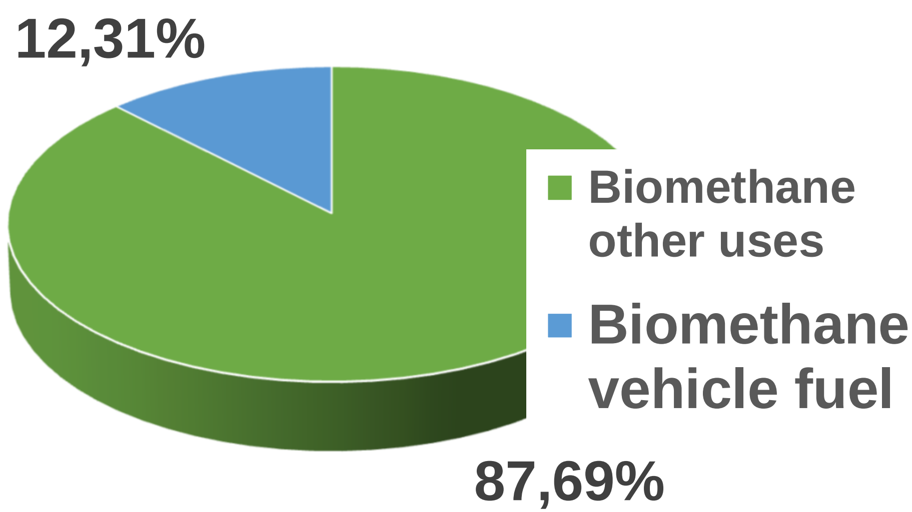
Advanced biofuels + biogas: produced from feedstocks listed in RED II Annex IX. Part A

- Algae
- **Biomass fraction of mixed municipal waste**
- Bio-waste from private households
- Biomass fraction of industrial waste including material from retail and wholesale and the agro-food and fish industry
- Straw
- **Animal manure and sewage sludge**
- Biomass fraction of wastes and residues from forestry and forest-based industries,
- Other non-food cellulosic material (including low starch cover crops)
- etc.

Share of CNG/LNG



Share of transport biomethane



Summary

- New impulses are expected from updating the EU energy and climate policies
- Nevertheless, the national governments are taking the decisions
- Direct correlation between financial support schemes and biomethane developments observed everywhere
- Presently limited possibilities for exporting biomethane from PL
- „Advanced" gaseous fuel production is the preferred option (subject to the size of the domestic CNG/LNG market)

Data sources:

(1) EBA Statistical Report 2018

(2) EBA-GIE Biomethane Map version June 2020

(3) Consorzio Italiano Biogas (CIB)

(4) Energigas Sverige

(5) Energinet.dk, GGCS (UK), dena (DE), VSG (CH)

(6) RTFC statistics (UK)

REGATRACE
Renewable Gas Trade Centre in Europe

Thanks for your attention!

Attila Kovacs
Secretary General, ERGaR
Email: kovacs@ergar.org
Flore Belin
Ass. Secretary General, ERGaR
Email: belin@ergar.org

This project receives funding from the European Union's Horizon 2020 Framework Programme Research and Innovation under Grant Agreement no. 857796

Back-up slides

RED II: Key renewable energy targets

- Member States shall collectively ensure that the **share of energy** from renewable sources in the Union's gross final consumption of energy in 2030 is at least **32 %.**
- 14% renewable share by 2030 in **transport fuel** consumption, including **3,5%** from „advanced" fuels (which are counted double – so in physical terms this corresponds to 1,75%),
- Each Member State shall endeavour to increase the share of renewable energy in the **heating/cooling sector** by an indicative **1,3%** as an annual average calculated for the periods 2021 to 2025 and 2026 to 2030, starting from the share in 2020.

Biomethane registries

- AT: AGCS
- CH: VSG
- DE: dena
- DK: Energinet
- EE: Elering
- FR: GRDF
- LT: Amber Grid
- UK: REAL/GGCS

Share of biomethane in the gaseous fuel market (estimated)