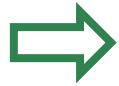


Green gas certification: *focus biomethane*

CWAPE : 20 Dec 2023





Competence center for (green) gas aspects: upstream, downstream and from infeed to client

Gas.be
Green gas

Cerga
New appliances

NGVA
Green mobility

Labo
New appliances

Promote natural gas and renewable gas to the market and policy

Quality label for installers and development of norms

Development of Gas for transport (CNG, bio-CNG, LNG, bio-LNG)

Lab for testing and accredit gas appliances



<https://greengasplatform.be/>

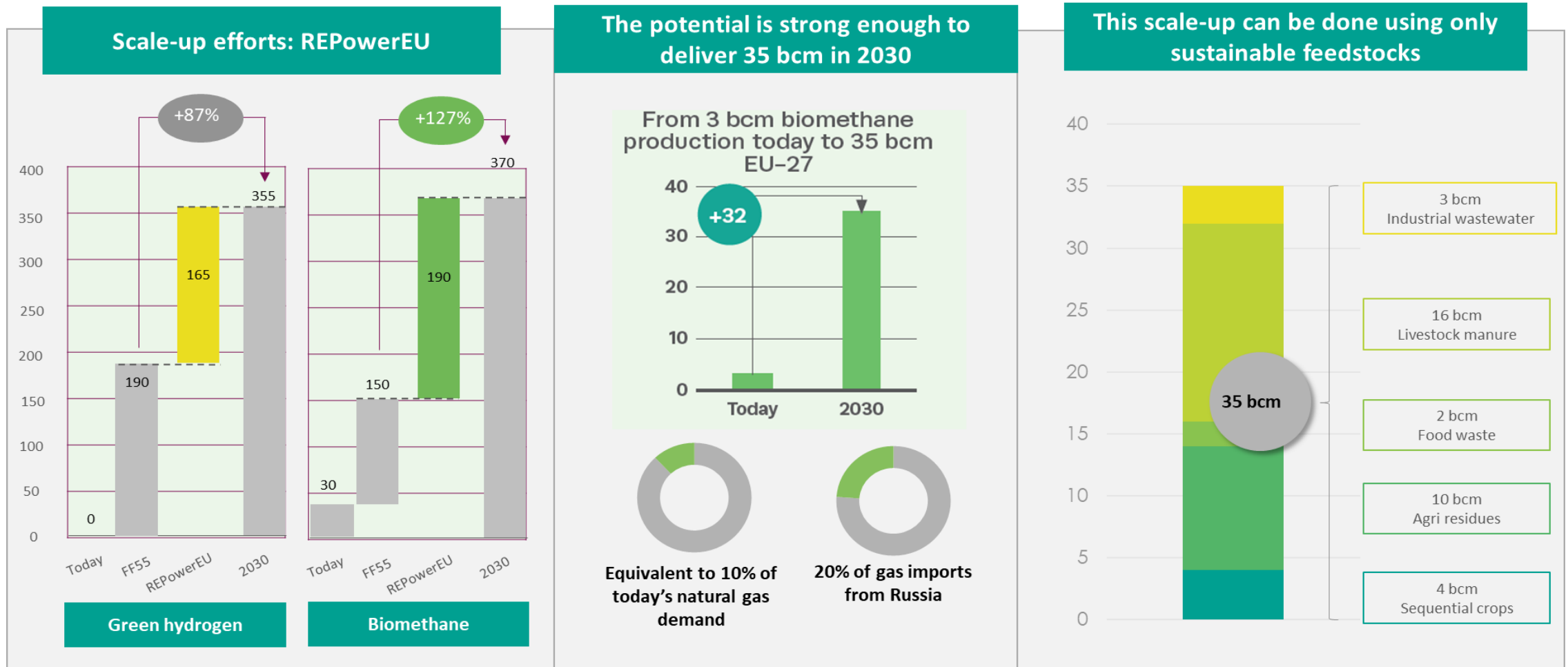


Green Gas in EU and Biomethane in Belgium

- 1 Biomethane in Europe and BE
- 2 Sales principles
- 3 Adequate certification in value chains
- 4 Advise to the market

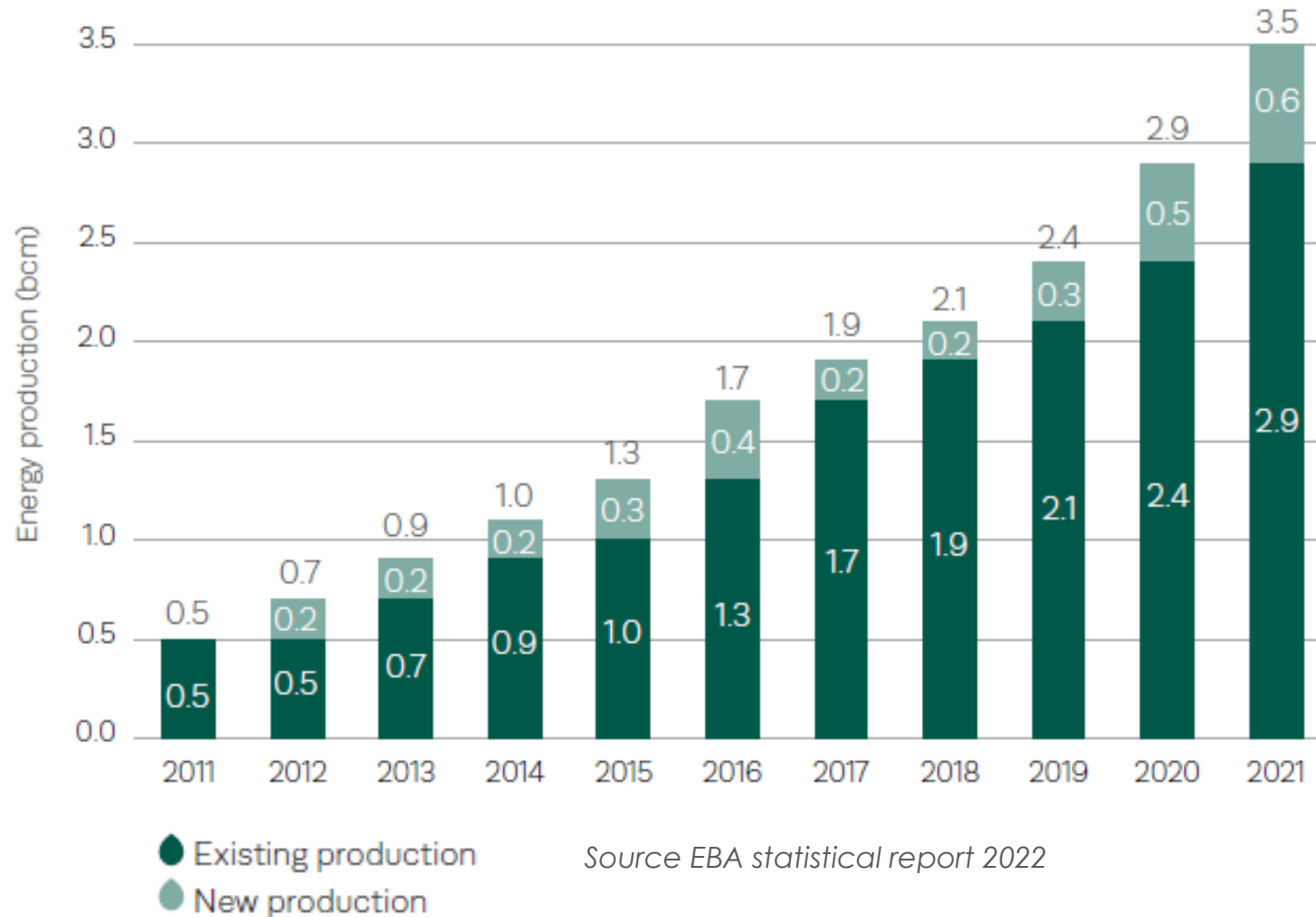
Repower EU: biomethane & hydrogen

Source EBA



To reach the EU target in 2030 we need to multiply by 10 the current green gas production
NO established as Hard Target

Biomethane production in Europe today



Source EBA statistical report 2022

- 3,5 BCM of biomethane or 1070 plants

average plant is
36 GWh/y or 400 m³/h

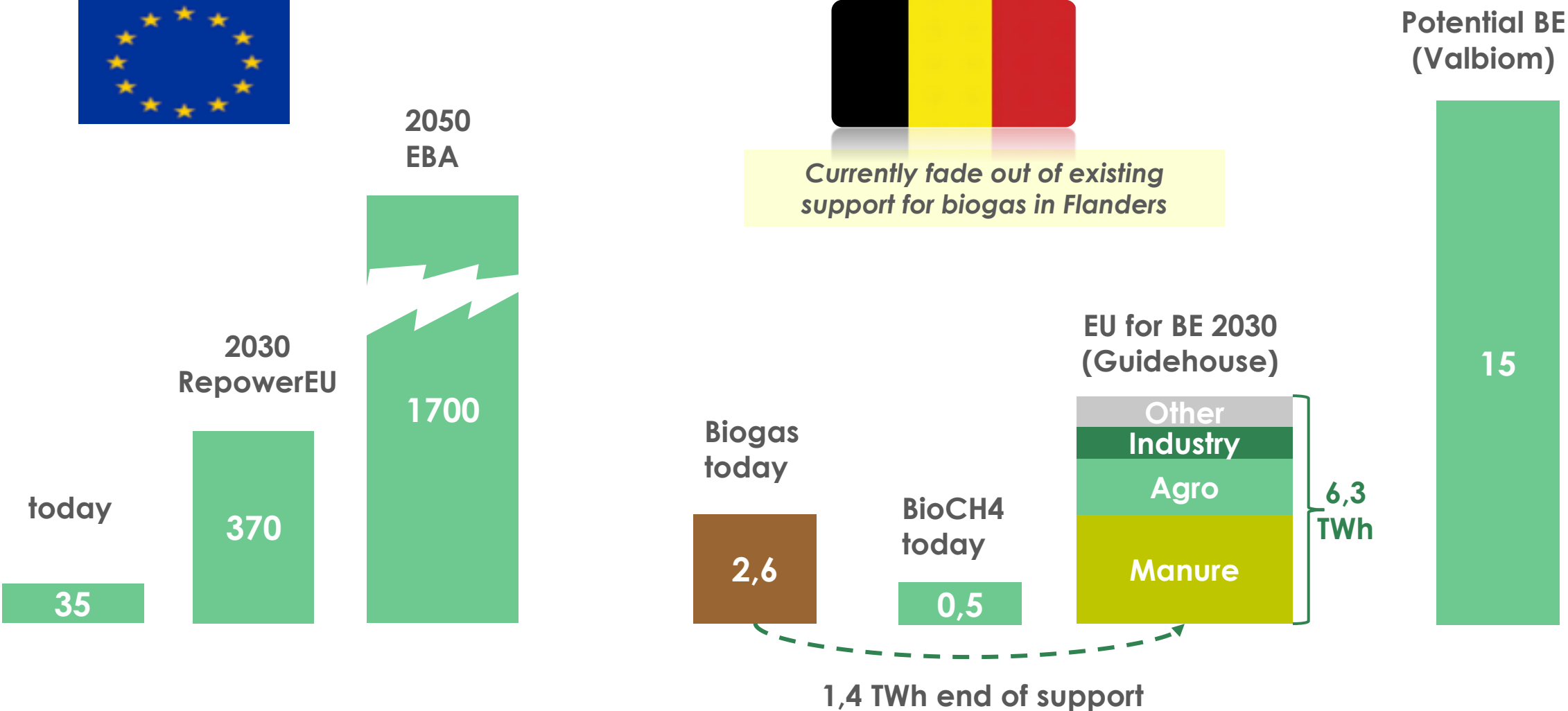
- 15 BCM is still Biogas of which at least 60% could be converted
- Increase of 17 %/y as (observed today) would lead to **12 BCM by 2030**

@ current growth rate
= 40 % of 35 BCM

EU assessment : [LINK](#)

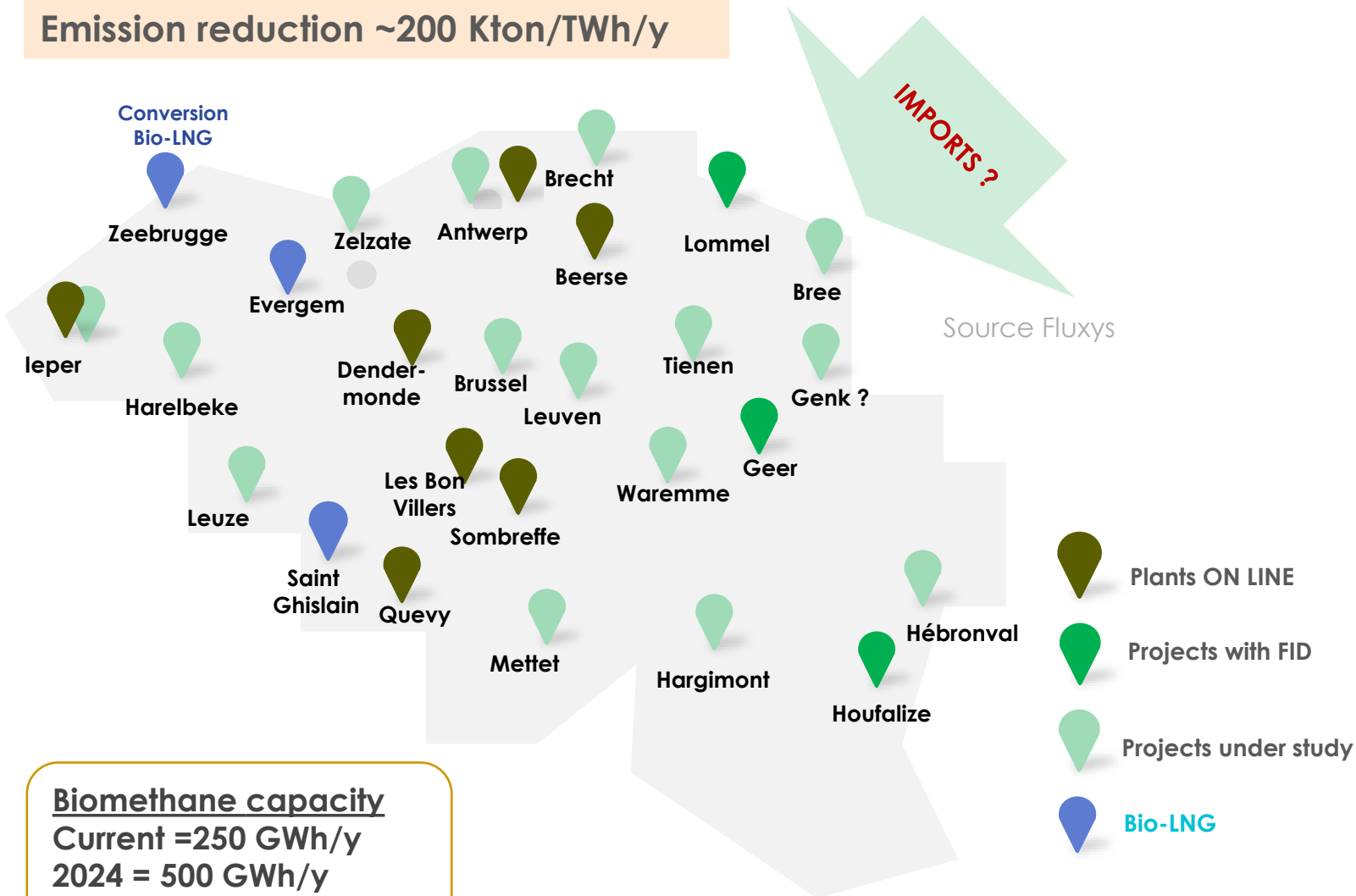


Short recap on Biomethane in EU and Belgium in TWh



Biomethane deployment BE → slow progress

Emission reduction ~200 Kton/TWh/y



Biomethane capacity
 Current = 250 GWh/y
 2024 = 500 GWh/y
 2026 => 1000 GWh/y ?

NEW INSTALLATIONS (expected)

- Wallonia : 50 – 80 GWh/y
- Flanders : 100 – 200 GWh/y
- Some bigger plants above 400 GWh/y (combined with bioLNG installation)
- Issue in Flanders: very **difficult to get permit for use of manure** (only when new)

CONVERSION BIOGAS TO BIOMETHANE

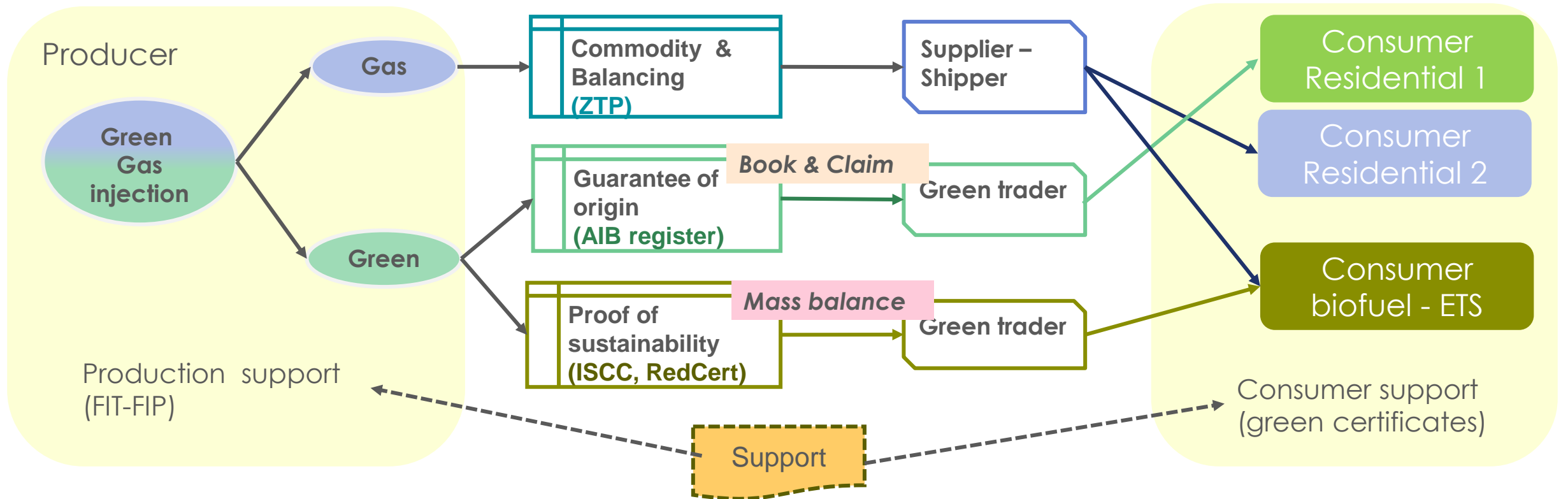
- 1,4 TWh in Flanders potential
- **Existing permits can be used**



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Buying / Selling green gas (Mass balance versus Book & Claim)



- **Gas part** is sold at the gas price (via existing natural gas market) to a supplier (levies are applicable)
- **Green part (GO or certificate)** is sold separately to a green trader (no levies, only TVA)
- **Mass Balance** (synchronicity between gas & green sales) is required for Biofuel and ETS
- **GO** are sold in **Book & claim the GO** → disclosure will be required (to avoid fraud)



Value for Biomethane → more focus on Targets – obligations

BELGIUM

- Wallonia : still support for biomethane in CHP
- Flanders : support for heat from CHP fading out



BE support is limited to Wallonia

COMPLIANCY MARKET

- Comply with EU and MS obligations
- Avoid PENALTIES and related CO2 COST



Specific conditions for BioCH4 and H2

CONSUMER SUPPORT

- keep production consumed in memberstate
 - Two sided contract for difference



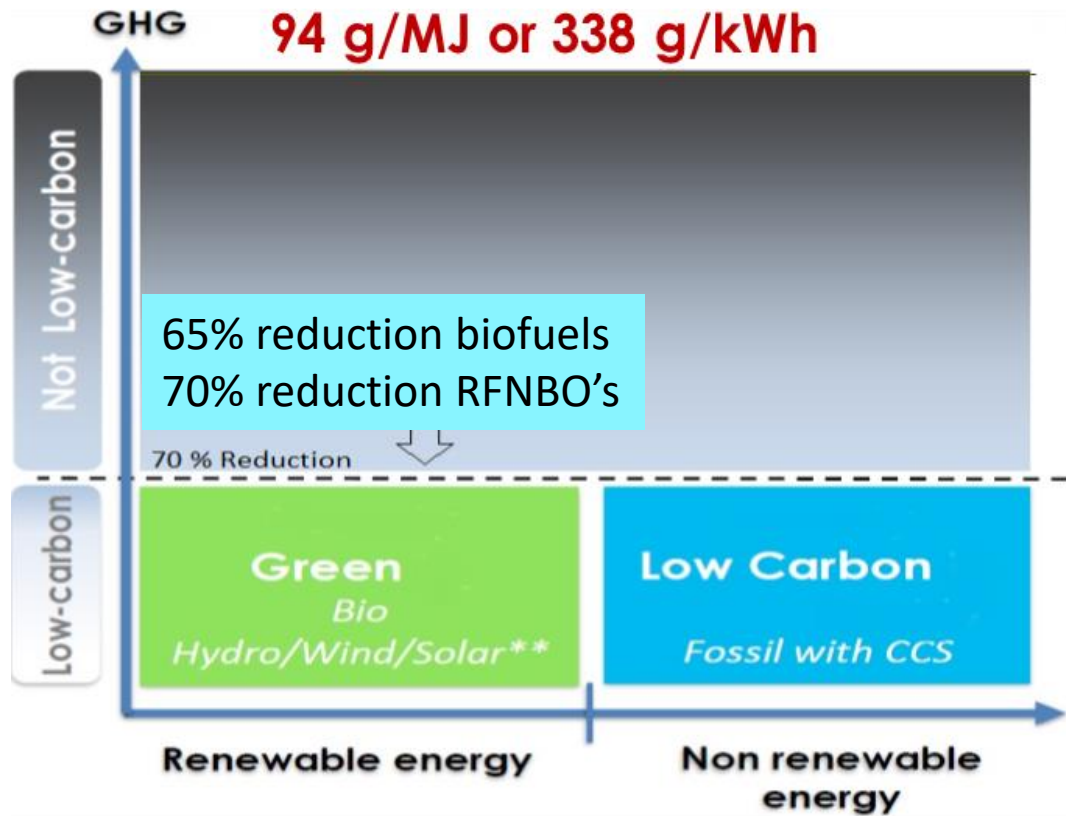
NEW

mechanisms to avoid over-support



Main criteria for EU compliant green gasses

1. GHG reduction must be sufficient:



Biomethane is in most cases Advanced biofuel
(compliant Annex IX, A of RED II)

2. RFNBO's → Compliancy EU targets and obligations

1. Additionality

- RES must be online within 36 months of H2 production
- RES may not receive support

2. Geographical correlation

- RES must be in bidding zone (Belgium)
- Neighboring bidding zones only under specific congestion rules

3. Temporal correlation

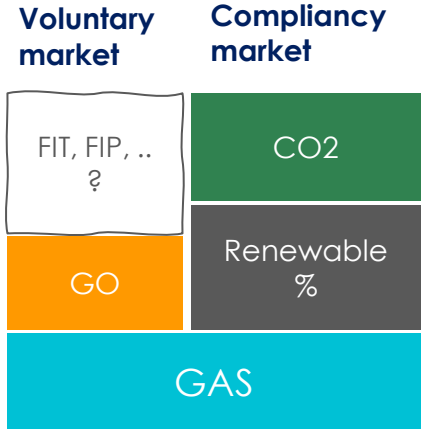
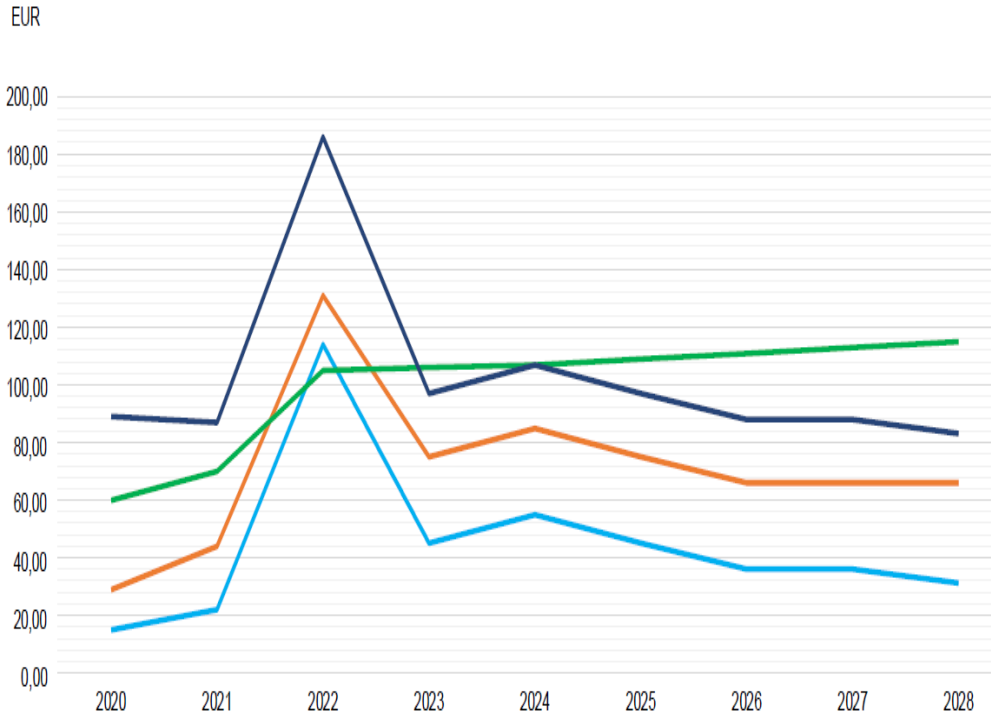
- RES must produce in same hour as hydrogen (as from 2030)
- Exception for plants build before 2028

Need for additional info and time-stamp on GO
Renewable Electricity



Value for green (biomethane) price in the markets

Indicative values



Market	Type	Green Value (€/MWh)
Voluntary market	Only GO	16- 25
Voluntary scope 3	Willingness	16- 50
German Suisse CO2 rulings	CO2 levies	50-100
Transport Fuels Nordics	Min mix%, obligations	40
Transport Fuels RED II (EU)	Min mix%, obligations	40-80
Transport Fuels RFTC (UK)	Min mix%, obligations	40-85
ETS EU	CO2 penalty	16-25

bioGem
e x p r e s s

<https://biogemexpress.com/>

OLYX

[Home - OLYX](#)

Important take aways

- Double counting in member state increases value with 50% 🟡
- Not certified (ISCC, RedCert, 2BS) decreases value with 50% 🔴
- High CO2 reduction can increase value up to 50% 🟡



Green Gas in EU and Biomethane in Belgium

1 Biomethane in Europe and BE

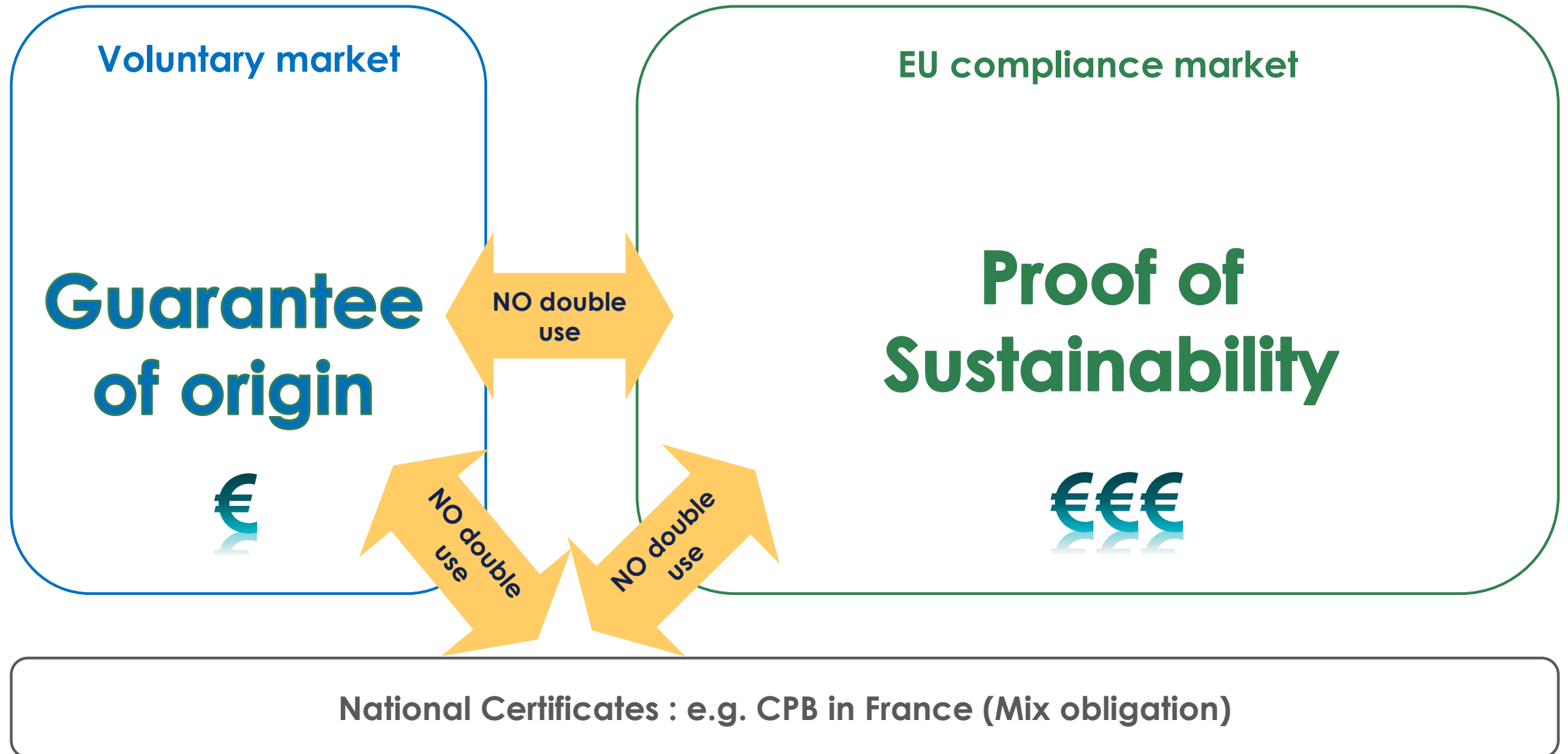
2 Sales principles

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Types of certification in Europe (1)



Types of certification in Europe (2)

Voluntary market



Guarantee of Origin (GO)

Companies, public organizations, households

To guarantee the origin of the gas they purchase (cfr. green electricity)

Requires **Proof of Origin** (describing source of gas, location of production, etc.)

It is purchased on a different market than the physical gas (**Book and claim**)



NO double use

EU compliance market



Renewable Transport Fuel Certificate

Fuel consumers

Fueling station owners, public transport companies, etc.

Next to **Proof of Origin** requires **Proof of Sustainability** incl. **GHG reporting**

This certificate is delivered together with the physical gas flow (**Mass balance**)



Certificates for the EU Emission Trading System (ETS)

Companies subject to the EU ETS

Energy-intensive industry, electricity generation, aviation, etc.

Requires **Proof of Origin** and **Proof of Sustainability** incl. **GHG reporting** as well as **Proof of Purchase**

This certificate is delivered together with the physical gas flow (**Mass balance**)



- ❖ GO systems per member state
- ❖ Import – export hindered (**only some MS allow exchange**)

- ❖ Proofs are provided by **EU recognized schemes**: ISCC, RedCert, ...
- ❖ EU transfer already possible
- ❖ All proofs shall be registered in **Union database as from 2024**



Types of certification in Europe (2)

Voluntary market



Flanders,
Estonia,
Austria,
...



Netherlands,
Germany,
Denmark,
...

EU compliance market



In some countries the
concept of **GO +**
(= **GO+ PoS**) exist
(e.g. Netherlands)



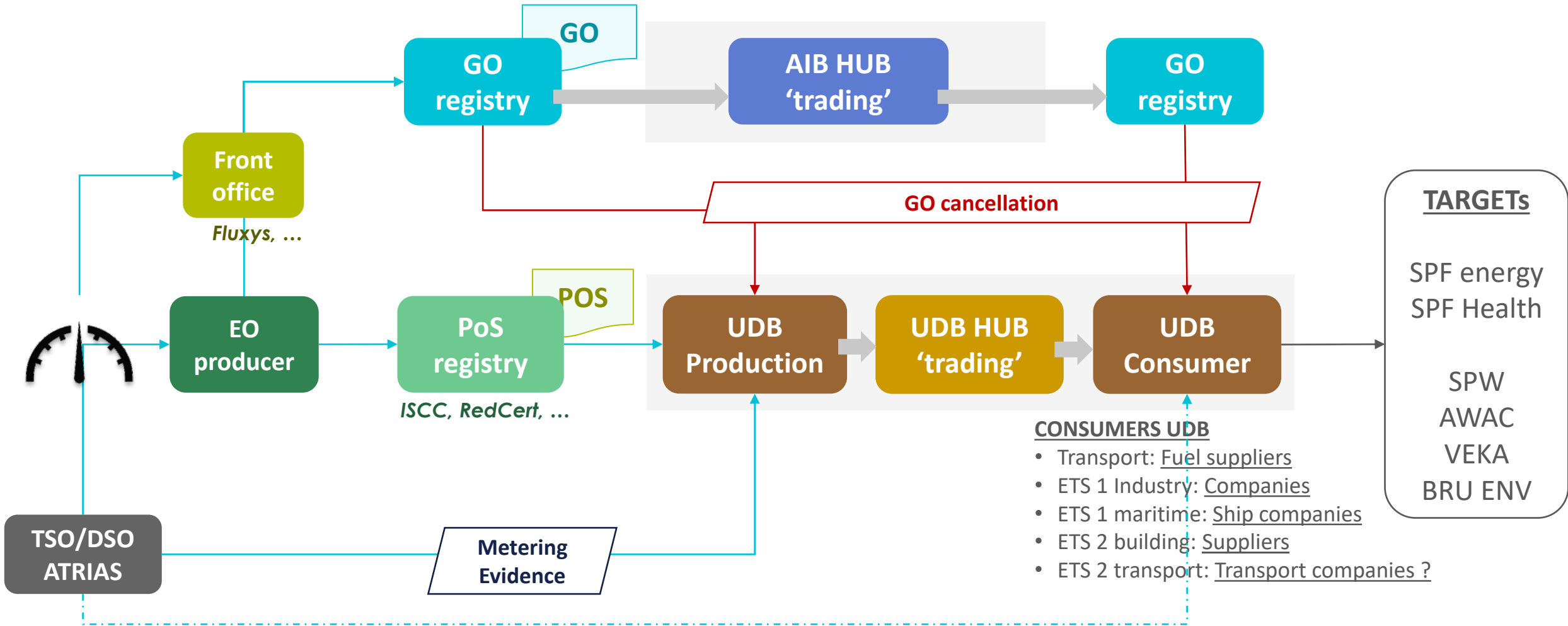
Fragmentation of competencies in BE is a fact: need to create consistency and where possible system centralization ?

Source: SIA partner study for Gas.Be

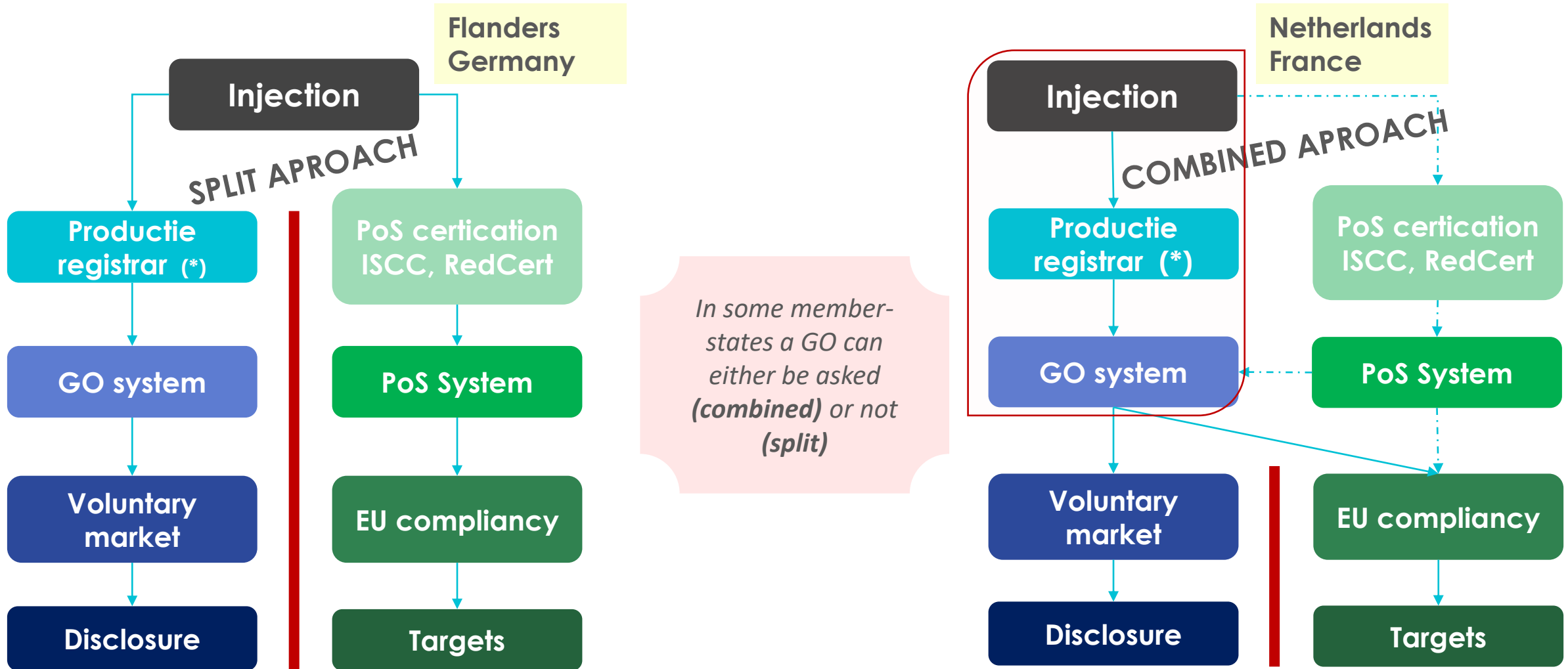
1 REGISTRATION		2 APPROVAL	3 TRADING	4 CANCELLATION	5 REPORTING
Energy	Certificate	Production coordinator			
Biomethane	Guarantees of Origin (GO) Art. 19 • Non-ETS (industry and heating)	VREG ¹ SPW Brugel	AIB Trading hub SPW OTC ?	• Cancelled in respective GO systems	• Disclosure of the GO
	Renewable Transport Fuel Certificates • Transport	FPS Health	OTC through EU voluntary scheme	• To be cancelled in UDB	• Contributing to targets through the FPS (via UDB)
	EU Emission Trading System (ETS) • ETS regulated industries	VEKA AWAC BruEnv	EU emission trading system	• To be cancelled in UDB	• Contributing to ETS targets (via UDB)
	'Voluntary Renewable Certificates' • Industry, heating and transport	EU voluntary schemes	OTC	• Cancelled in the EU voluntary scheme's system	• Not contributing to targets
Green Hydrogen	Guarantees of Origin (GO) Art. 19 • Non-ETS (industry and heating)	VREG ? ?	AIB Trading hub ? ?	• Cancelled in respective GO systems	• Disclosure of the GO
	Renewable Transport Fuel Certificates • Transport (RFNBOs)	FPS	OTC through EU voluntary scheme	• To be cancelled in UDB	• Contributing to targets through the FPS (via UDB)
	EU Emission Trading System (ETS) ⁴ • ETS regulated industries	? ? ?	EU emission trading system	• To be cancelled in UDB	• Contributing to ETS targets (via UDB)
	'Voluntary Renewable Certificates' • Industry and heating	EU voluntary schemes	OTC through EU voluntary scheme	• Cancelled in the EU voluntary scheme's system	• Not contributing to targets
Low Carbon CH4	Guarantees of Origin (GO) Art. 19 • Industry and heating			• Cancelled in respective GO systems	• Disclosure of the GO
Low Carbon H2	Guarantees of Origin (GO) Art. 19 • Industry and heating	Probably Regions	Probably Regions		



Future (expected) process flow for certification in EU

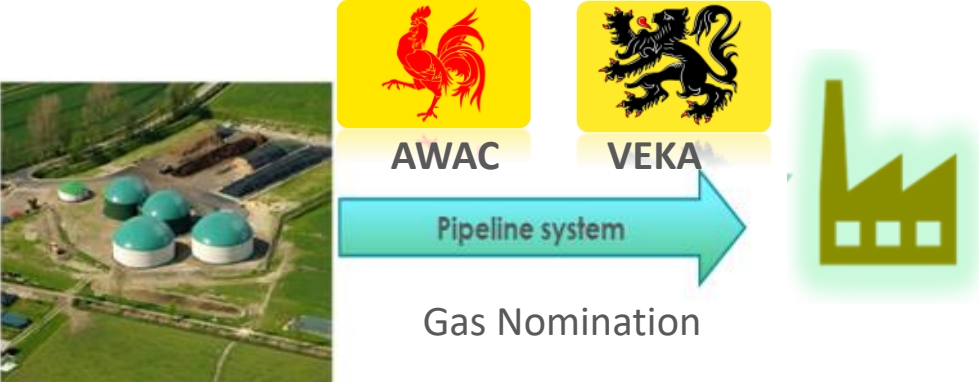


Different approaches on certification in EU (perspective producer)

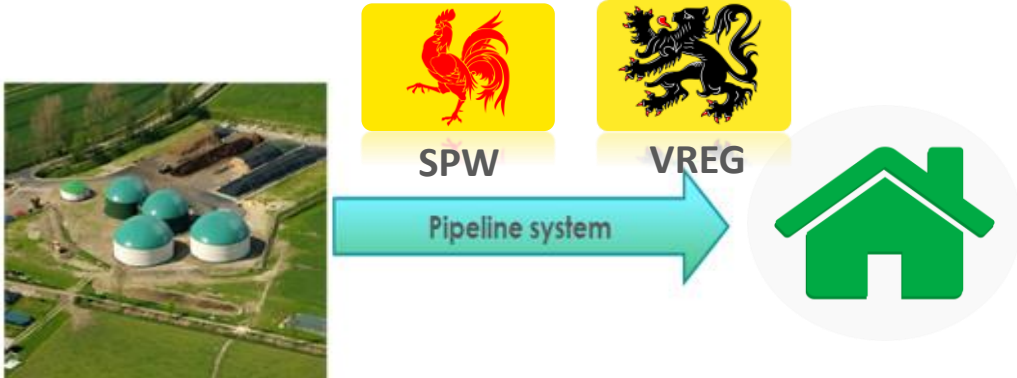


Example : PoS (ETS, transport) and Guarantee of origin

Industrial ETS customer



Residential customer



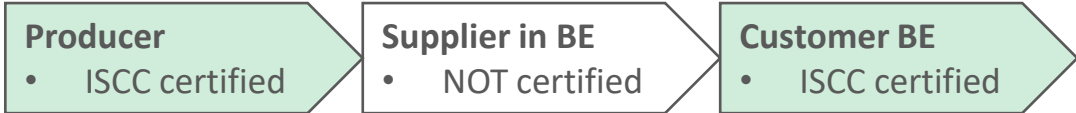
Guarantee of origin
 • SPW, VREG, import?

+

Biomethane PoS
 • ISCC, RedCert,...

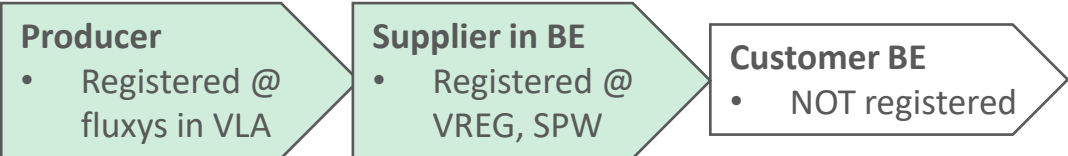
+ cancellation statement GO (if any)

Guarantee of origin
 • SPW, VREG (import ?)



CO2 production
10g /-40g

CO2 Injection
2g



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Advise to the market: be ready for green

Certification = you might need **certification accountant** to do the job



Fiscality = you have a fiscal accountant to do the job



THANK YOU FOR ATTENTION



GREEN GAS MARKET
development team

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Lisbet Claessens

 gas.be : **We can assist you**

