

# Biomethane for ETS in EU

Gas.be

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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



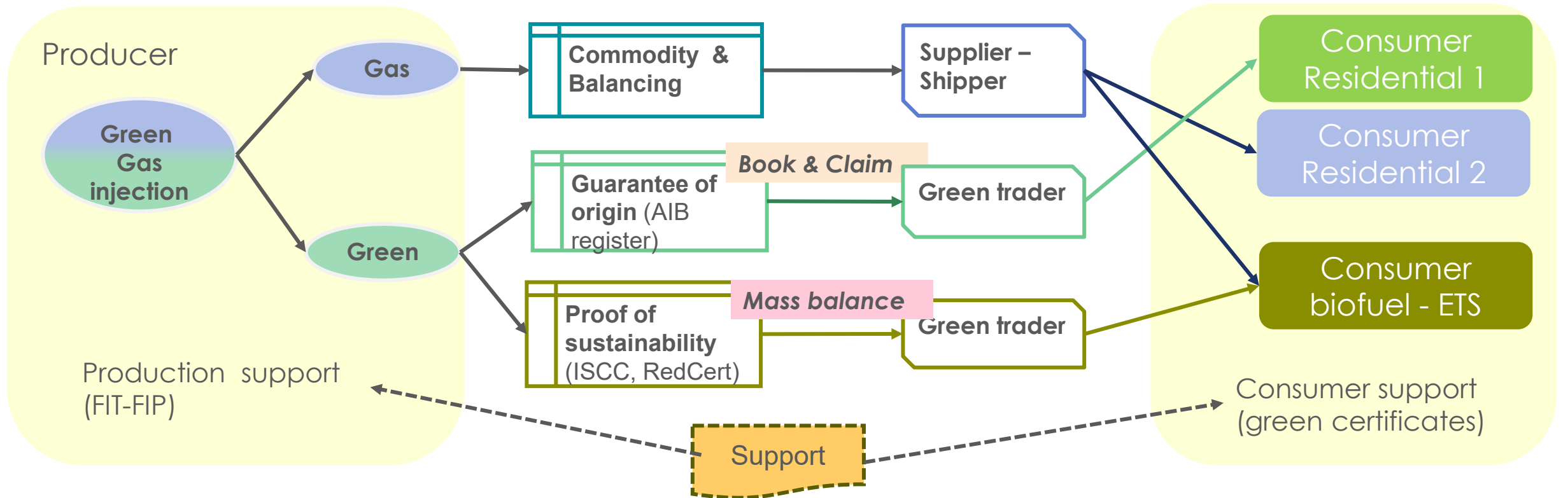
<https://greengasplatform.be/>



# Biomethane for ETS

- 1 Recap on biomethane sales and certification
- 2 Current EU rulings for ETS
- 3 Union database impacts

# 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
- **Support** typically requires additional certificates (like 'certificats vert')



# Mass balance concepts in EU (clarification)

## Identity preservation

- Consignments contain 100% certified product from a uniquely identifiable source
- For each certified source separately delivered consignments are required

## Physical segregation

- Consignments contain 100% certified products
- Consignments can be derived from different certified sources

## Mass balance

- Certified and non-certified products can be physically mixed
- Characteristics remain administratively attached to the consignment

## Book and claim

- Trade of consignments and renewable characteristics (certificates) are decoupled from each other

## Tracing of renewable characteristics

### IDENTITY PRESERVATION



### SEGREGATION



### MASS BALANCE



### BOOK & CLAIM



Source: Ellen Macarthur Foundation (ed.) 2019: ENABLING A CIRCULAR ECONOMY FOR CHEMICALS WITH THE MASS BALANCE APPROACH



# Types of certification in Europe

## 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)

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

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



# Certification schemes in Europe

**Voluntary market**  
GO → lifetime 18 months



Flanders,  
Estonia,  
Austria,  
...



Netherlands,  
Germany,  
Denmark,  
...

**EU compliance market**  
PoS → indefinite lifetime



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



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# Basic EU rulings of MRR directive in force

Article 38 (1) The **emission factor of biomass** shall be zero.

Includes Biomethane

Article 38 (5) **sustainability and GHG emission saving criteria** according to paragraphs 2-7 and 10 of Article 9 Directive 2018/2001 (RED II)

Needs proof of sustainability

Article 39 (4) determination of biomass fraction for biogas by using purchase records

(1) there is **no double counting of the same biogas quantity**, in particular that the biogas purchased is not claimed to be used by anyone else, including through a disclosure of a guarantee of origin as defined in Article 2(12) of Directive (EU) 2018/2001

Single use

(2) the operator and the producer of the biogas are **connected to the same gas grid**.

Mass balance

For the purpose of demonstrating compliance with this paragraph, the operator may use the data recorded in a database set up by one or more Member States which enables tracing of transfers of biogas

Track and trace



## Article 39 (4): further guidance

### Purchase record → track and trace principle

- Certificates from a **biogas registry that acts as a mass balance system** according to RED II

### Same grid → mass balance principle

- major part of the EU Member States' natural gas grids are connected and can therefore be considered to be under **one single logistical facility** for the purpose of the RED II.

### Biomethane GO cancelled → single use

- Double counting of purchase records (certificates of a mass balance biogas registry/database) and
- biogas GO must be avoidedNo issuance of biogas GO or cancellation of the biogas GO (towards the EU ETS installation)

### Biogas trading across MS → single use

- All participating registries must ensure that the certificate for biomethane transferred out of the Member State is immediately cancelled, and that for each imported biomethane quantity, the correct number of new certificates is generated.



# Specific requirement (including Union database UDB)

[Empty box] → Sustainability Certification according to a recognized EU Voluntary Scheme

Compliance with GHG emission saving criteria (CO2eq calculation following RED II) →

- GHG emission saving threshold depending on the commissioning date of the ETS plant:
- t<2021:none; t=2021-2025: 70%; t>2025: 80%
- commissioning date: first time of continuous biomass use

Purchase records  
Single use  
Same grid  
Biogas trading  
Mass balancing  
others

Issuance of PoS in UDB →

„inadmissible double funding is excluded by PoS“

Imports of biomethane are eligible →

No further guidance

Mass balance to be respected →

According to article 30 (1) RED II“

No solution yet on:

- Interaction UDB and GO registries (on going)
- Import from non-EU countries in UDB



# Specific requirement (including Union database UDB)

Compliance and sustainability requirements

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No further guidance

Mass balance to be respected



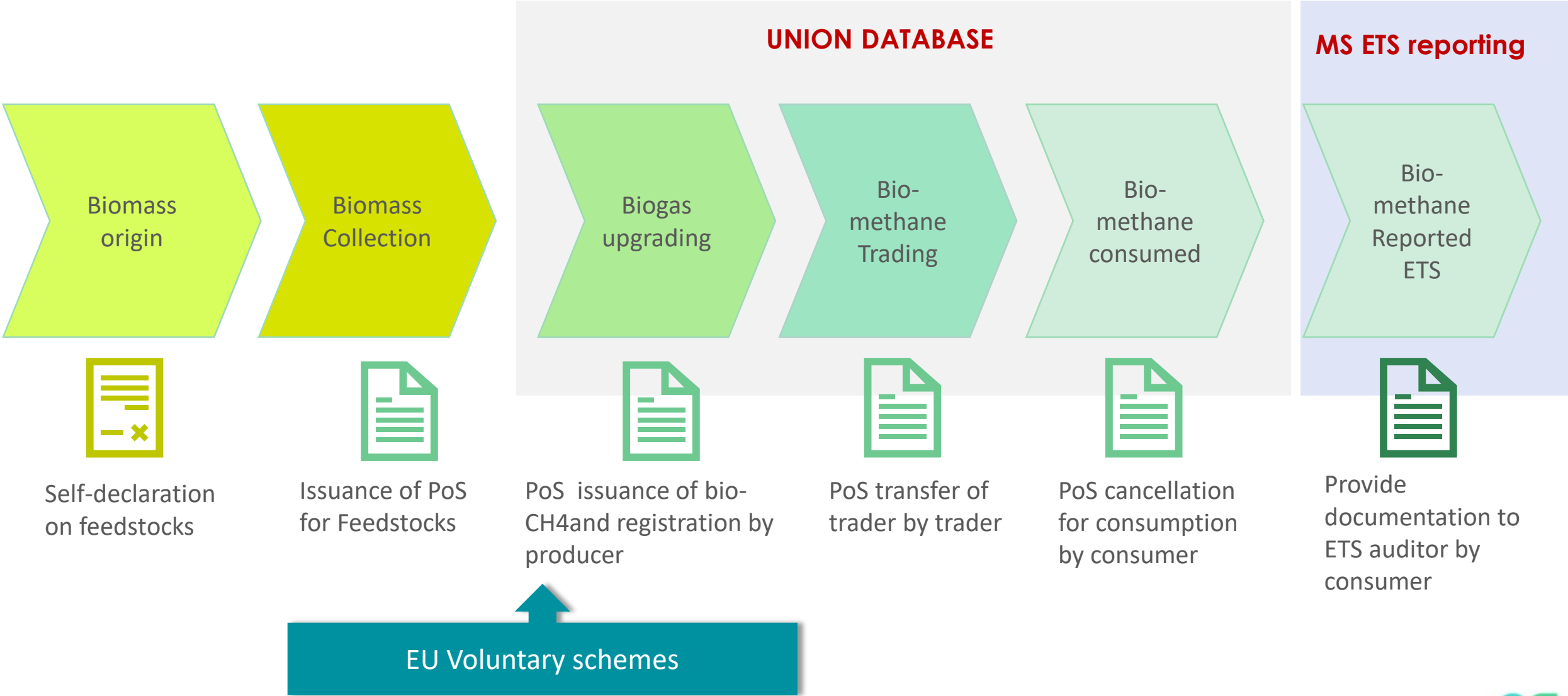
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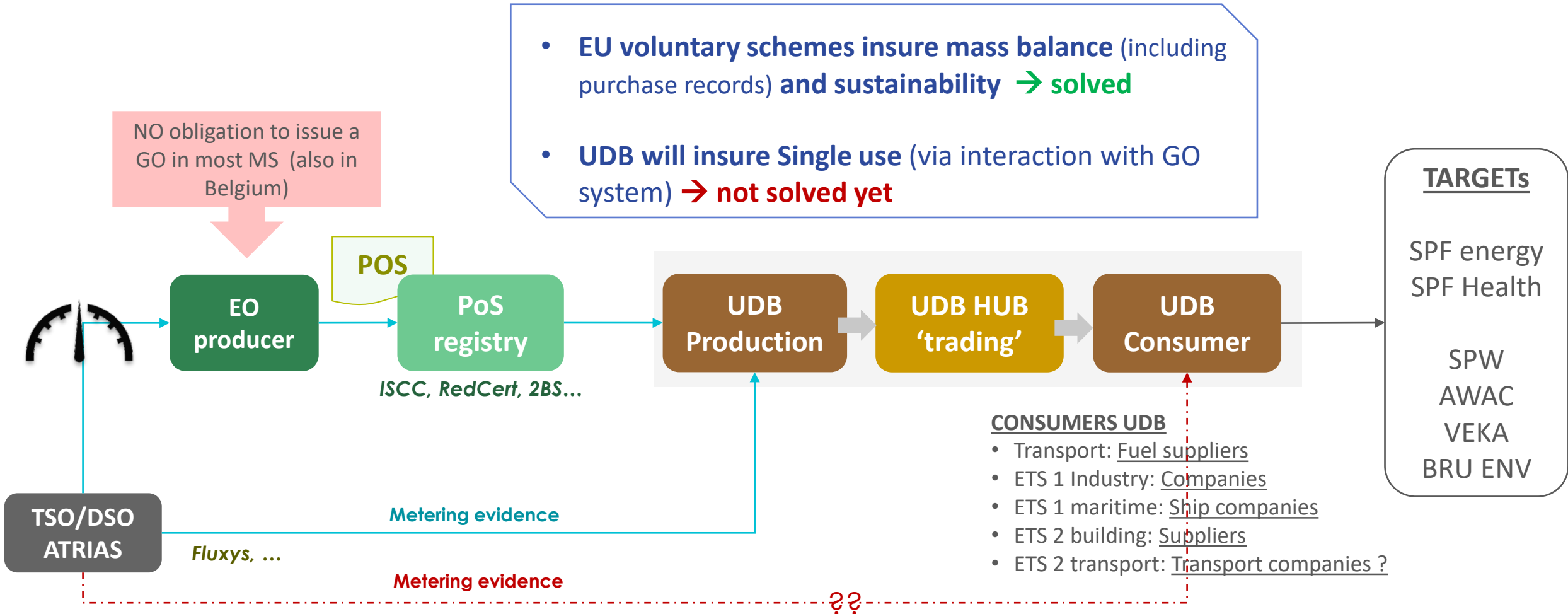
# From Biomass feedstock to biomethane consumption



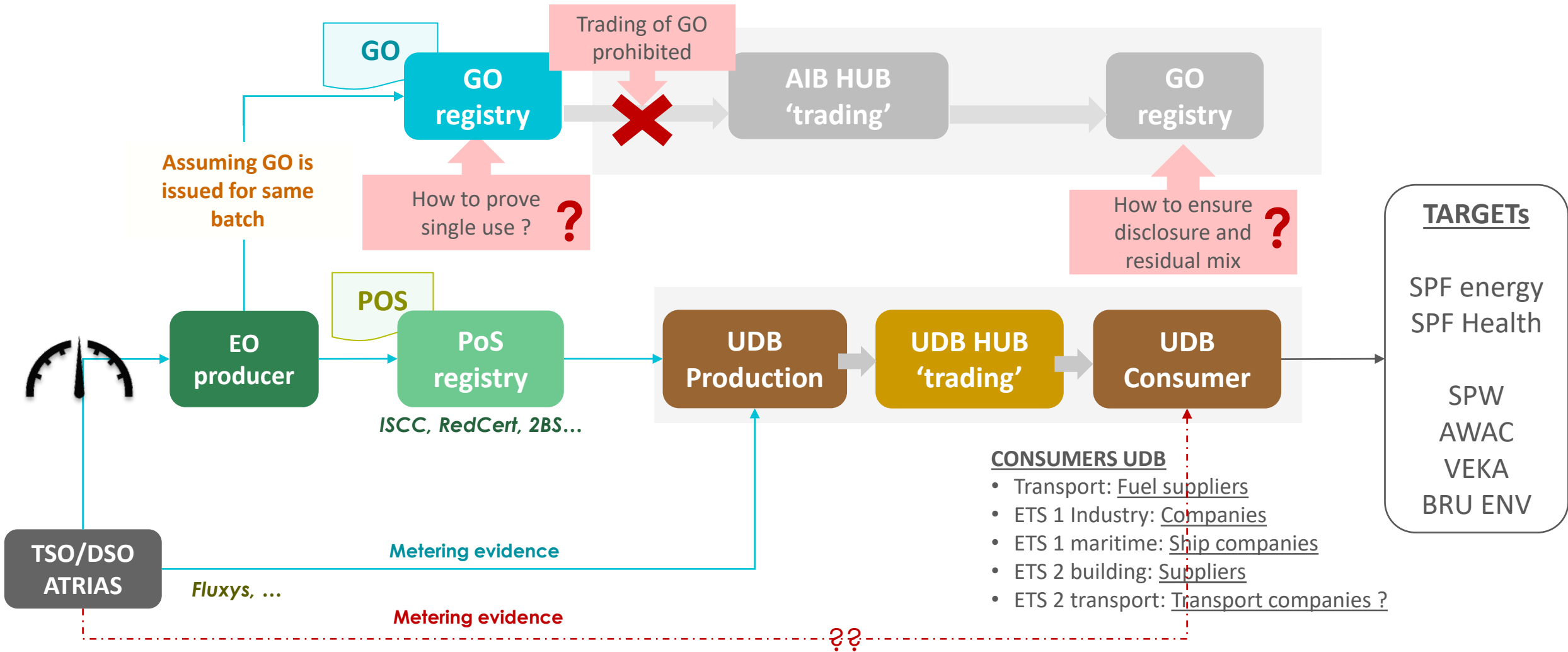
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# Process for compliancy certification in EU (baseline)

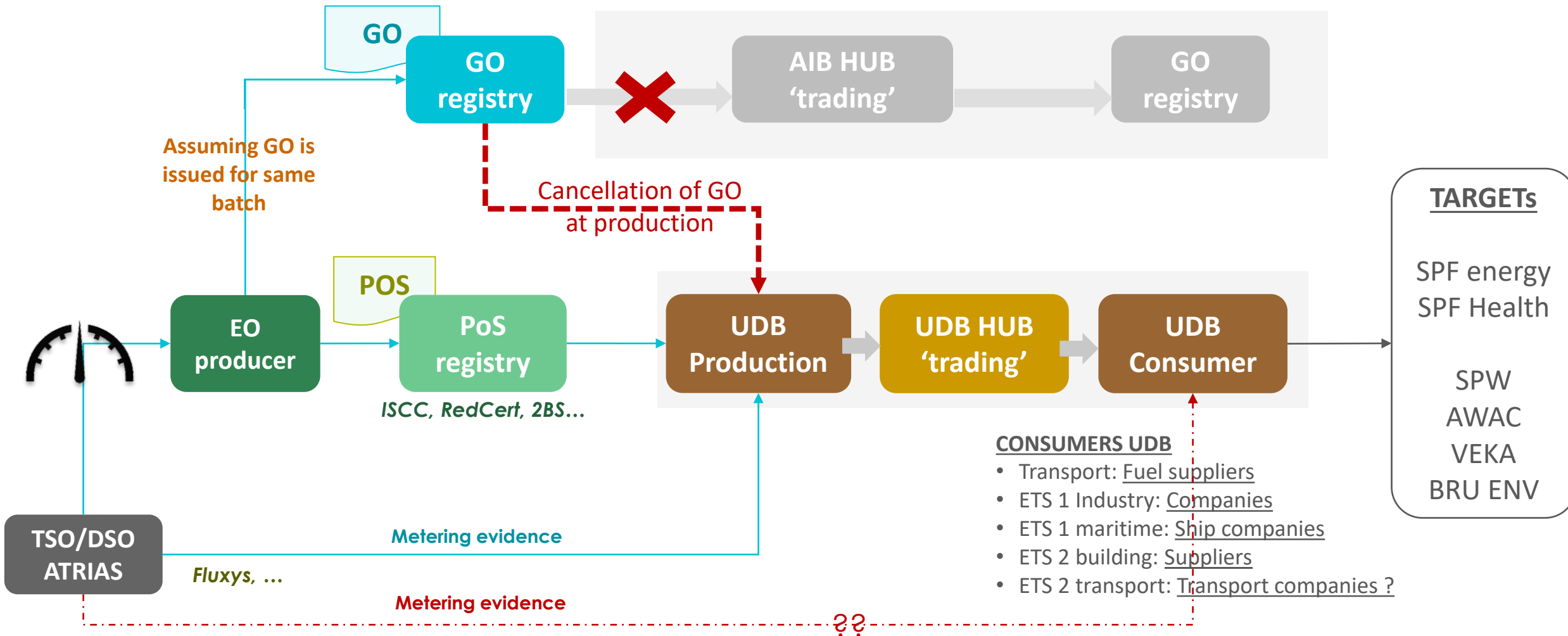


# Process for compliancy certification in EU (interaction GO system)





# Process for compliancy certification in EU (solution 2024)



# THANK YOU FOR ATTENTION



## GREEN GAS MARKET development team

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# Biomethane for ETS in RED II(I)

## 1. Existing MRR and RED II

- Since 2021 in EU (MRR directive) **biomethane with 70 % GHG** can be used for ETS 1 reduction as a Zero Emission fuel
- the applicable ruling is **in force In Flanders since 2022 (VEKA)**  
→ issue with imported biomethane
- the applicable ruling is expected to be **in force In Wallonia as from 2023 (AWAC)**

**ETS 1 price is now just under 100 € /ton CO<sub>2</sub>eq CH<sub>4</sub> → avoided cost 20 €/MWh**

- **If Biomethane is supported, support must be decreased with ETS value**

## 2. New MRR and RED III (2025 reporting only ?)

- **Maritime and aviation included in ETS 1** (existing ETS) → rulings remain
- **Free allowances** will be further **reduced** (except for Carbon Leakage sectors)

**ETS 1 price expected to be between 100 - 120 €/ton CO<sub>2</sub>eq**

- **for buildings and transport ETS 2** will become applicable

**ETS 2 price expected to be capped at 45 €/ton CO<sub>2</sub>eq or 9 €/MWh for CH<sub>4</sub>**

- Competent authority assumed regions (exception transport?)

