

ERGaR: Tool for cross border transfer and mass balancing biomethane within the European natural gas network

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Why do we need cross-border trade with biomethane?

- **The general function of trade** (securing supply-demand balances in time and space) is relevant to biomethane too.
- **Processing and utilising all organic waste** is in the common interest of the mankind – it should not be limited by short-sighted local politics.
- **New biomethane producing projects can be developed** with a higher chance of success if not limited to the domestic market.
- **Natural gas/biomethane blends** – having excellent GHG characteristics – must be made available to motorists all over Europe.
- **International companies with environmental awareness** want to have renewable fuel supplies everywhere.

Three pillars of the cross-border biomethane administration

1. **European natural gas network** (consisting of the transmission and distribution systems) **treated as single logistical facility** with regard to injected biomethane.
2. **Mass balancing of injected and withdrawn biomethane consignments** within the European natural gas network.
3. **Sustainability verification** (prior to grid injection) and **cross-border transfer of sustainability claims**.

The proposed solution

ERGaR (**E**uropean **R**enewable **G**as **R**egistry)

- ✓ **ERGaR aisbl** (non-profit international organisation) established 28th September, 2016 in Belgium
- ✓ **ERGaR RED** - biomethane specific voluntary scheme established and operated by ERGaR aisbl
- ✓ **Function: mass balancing of biomethane** distributed along the European natural gas network with transfer of related sustainability certification
- ✓ **Core documents: Biomethane Proofs of Origin** issued by the national biomethane registries
- ✓ **ERGaR RED seeks recognition by the European Commission** under the RED as a voluntary scheme

Basic data

- **European Renewable Gas Registry**
- Established on 28th September 2016
- Aisbl – International no-profit organisation
- Contact Persons:
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ERGaR members

Austria	AGCS Gas Clearing & Settlement AG
Belgium	European Biogas Association (EBA)
Germany	German Energy Agency (dena) Fachverband Biogas (FvB)
	Landwärme GmbH
Denmark	Energinet.dk NGF Nature Energy
France	Gas Réseau Distribution France (GrDF)
Ireland	Renewable Gas Forum Ireland (RGFI)
Italy	Consorzio Italiano Biogas (CIB) Vertogas
The Netherlands	AFS Energy STX Services B.V.
UK	Renewable Energy Assurance Ltd. (REAL)
Switzerland	Swiss Association of Gas Industry (VSG) Energie 360°

ERGaR Executive Board

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Function of mass balancing by ERGaR

RED Recital (76):

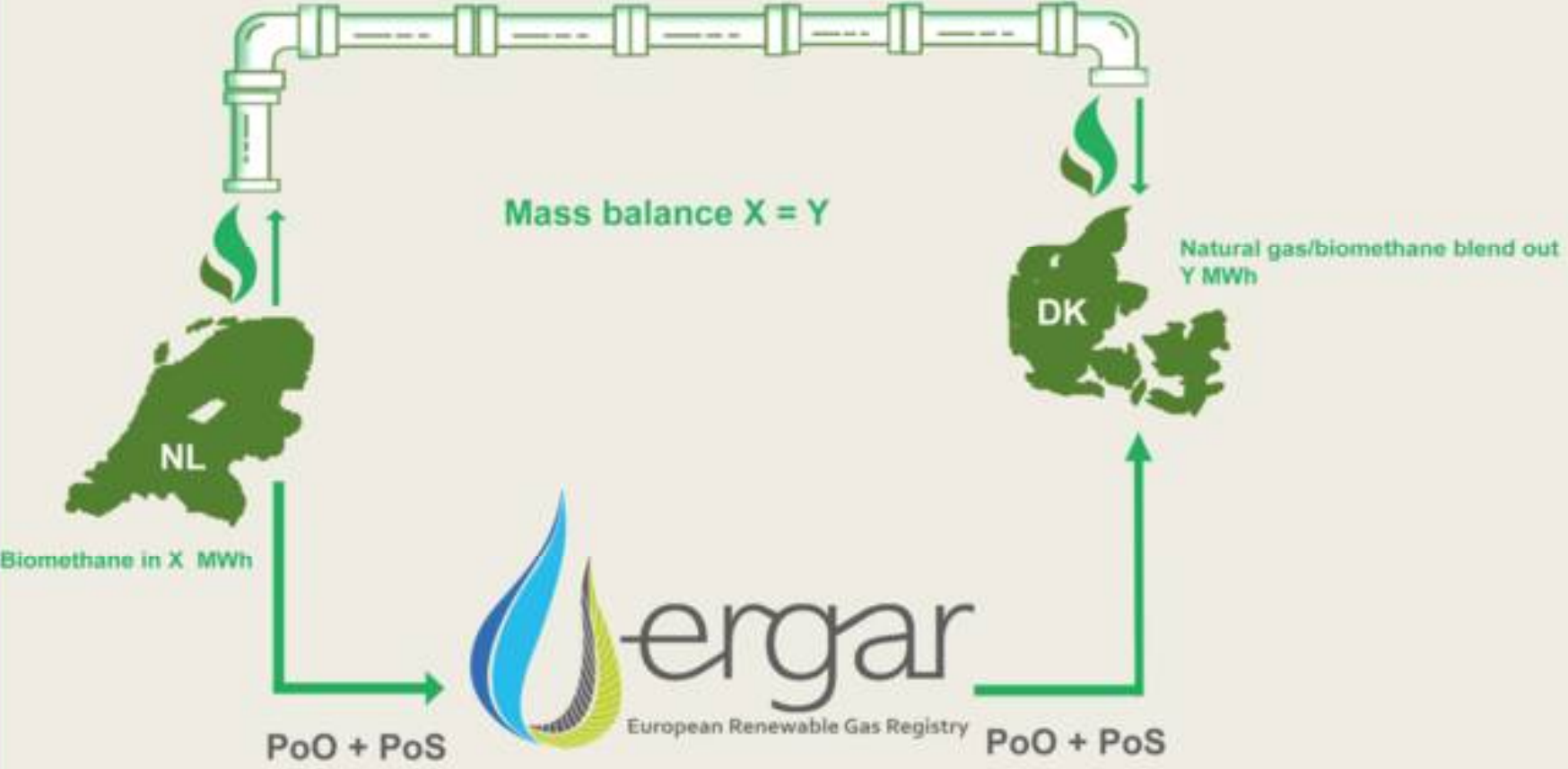
*“According to the mass balance method of verifying compliance, there is a **physical link between the production** of biofuels (and bioliquids) meeting the sustainability criteria **and the consumption** of biofuels (and bioliquids) in the Community.”*

The physical link between the production and consumption of biomethane is the natural gas network, the administration must ensure the balancing of every injected consignment with the corresponding withdrawn consignment.

Mass balancing consignment by consignment



Mass balancing by ERGaR



Why do we need the transfer of sustainability characteristics?

The **principal answer** is in the RED which makes it mandatory:

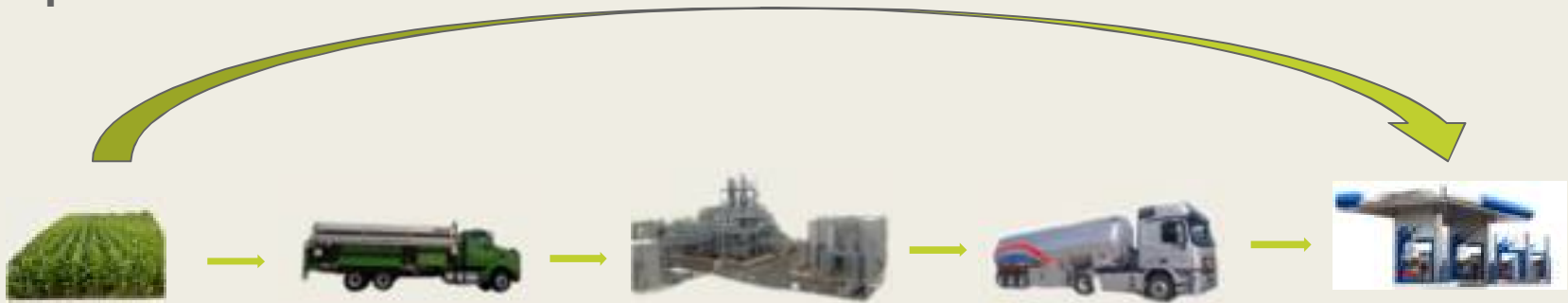
“Biofuel production should be sustainable. Biofuels used for compliance with the targets laid down in this Directive, and those that benefit from national support schemes, should therefore be required to fulfil sustainability criteria.”

The **business reasoning** is also formulated in the RED:

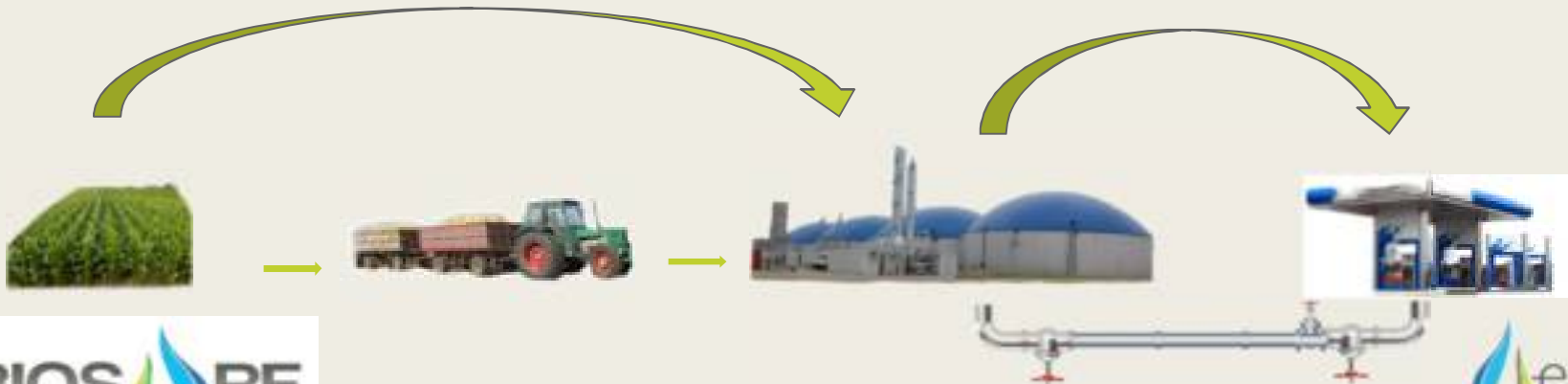
*“Sustainability criteria will be effective only if they lead to changes in the behaviour of market actors. Those changes will occur only if biofuels meeting those criteria command a **price premium** to those that do not.”*

Chain of Custody for Biofuels

Liquid biofuels:



Biomethane:



Cross Border Transfer of Sustainability Claims

The **sustainability verification** for biomethane injected into the European natural gas network for export purposes should consist of **two steps**:

1. The **first part of the chain of custody** – *from raw material supplies through production/upgrading to grid injection* – will be covered by one of the established sustainability verification procedures, exactly like in case of liquid biofuels.
2. The **second part of chain of custody** – *from the moment of grid injection to the withdrawal by the end-user* – will be covered by the new voluntary scheme applying the mass balancing methodology.

What will be the benefits?

- ❑ **Gaseous biofuel** (biomethane) can be made available to motorists **everywhere in Europe** in blends with CNG and LNG.
- ❑ **New biomethane producing projects can be developed** with a higher chance of success if not limited to the domestic market.
- ❑ **Organic waste utilisation becomes possible** even in countries where otherwise the conditions are not suitable (governments not supportive, local market undeveloped, project finance difficult).
- ❑ **International companies with environmental awareness** will have renewable gaseous fuel supplies in every European country they operate.