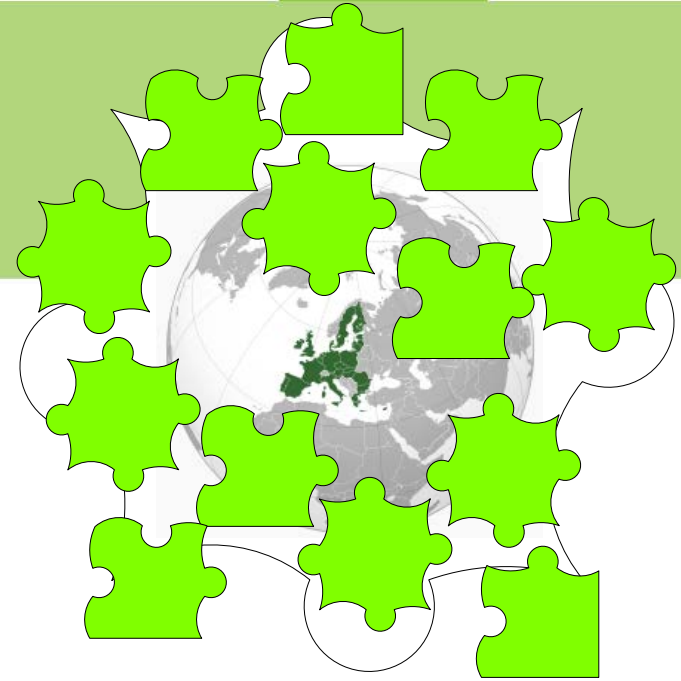


Vertogas B.V.



## Pieces of the Certificate Puzzle

Stimulating the EU green gas market with Guarantees of Origin

*Tallinn 26 November 2011*

# The birth of Vertogas

Issuing  
Bodies



- In 2005 Gasunie divided in two companies, Gasunie and GasTerra
- Ministry of Finance is 100% share holder

- ***Pillars Gasunie Vision Sustainable Future***
  - *Enable transition towards more sustainable energy*

- **Founded Vertogas in 2009**
- **Mandated by the Dutch government in 2015**



# Vertogas - Mission

Trust

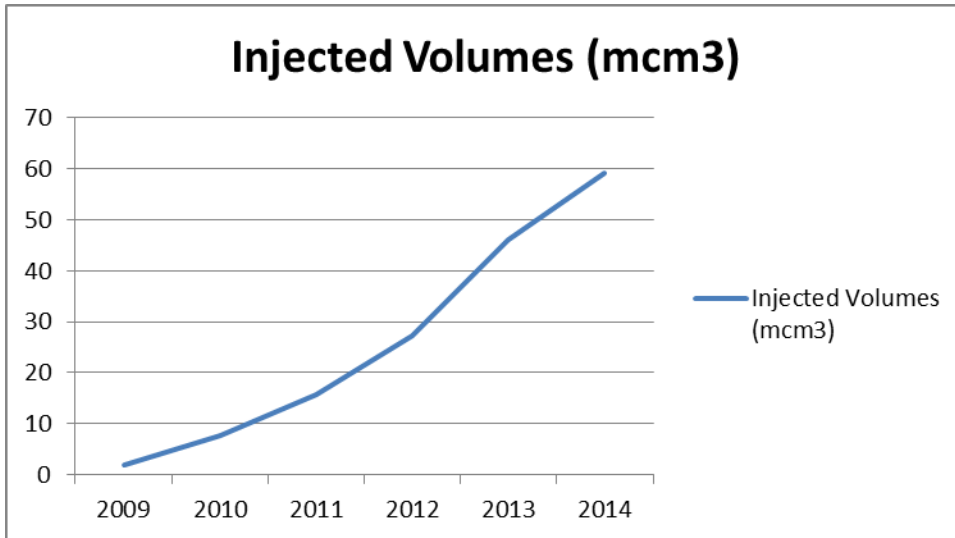
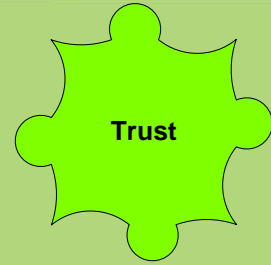


- **Guarantee** for market confidence
- **Clarity** about the origin
- **Certainty** about green gas

**Vertogas** certification of green gas makes clear to the market that it is **really green!**

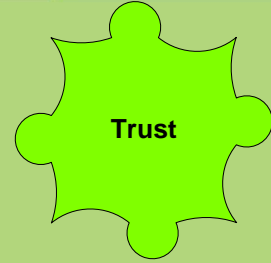
Picture: Anna Pol

# Vertogas growth through the years



- Green Gas Facilities registered  $\approx$  20
- Green Gas Traders registered  $\approx$  35
- Average Trades Cycles  $\approx$  2

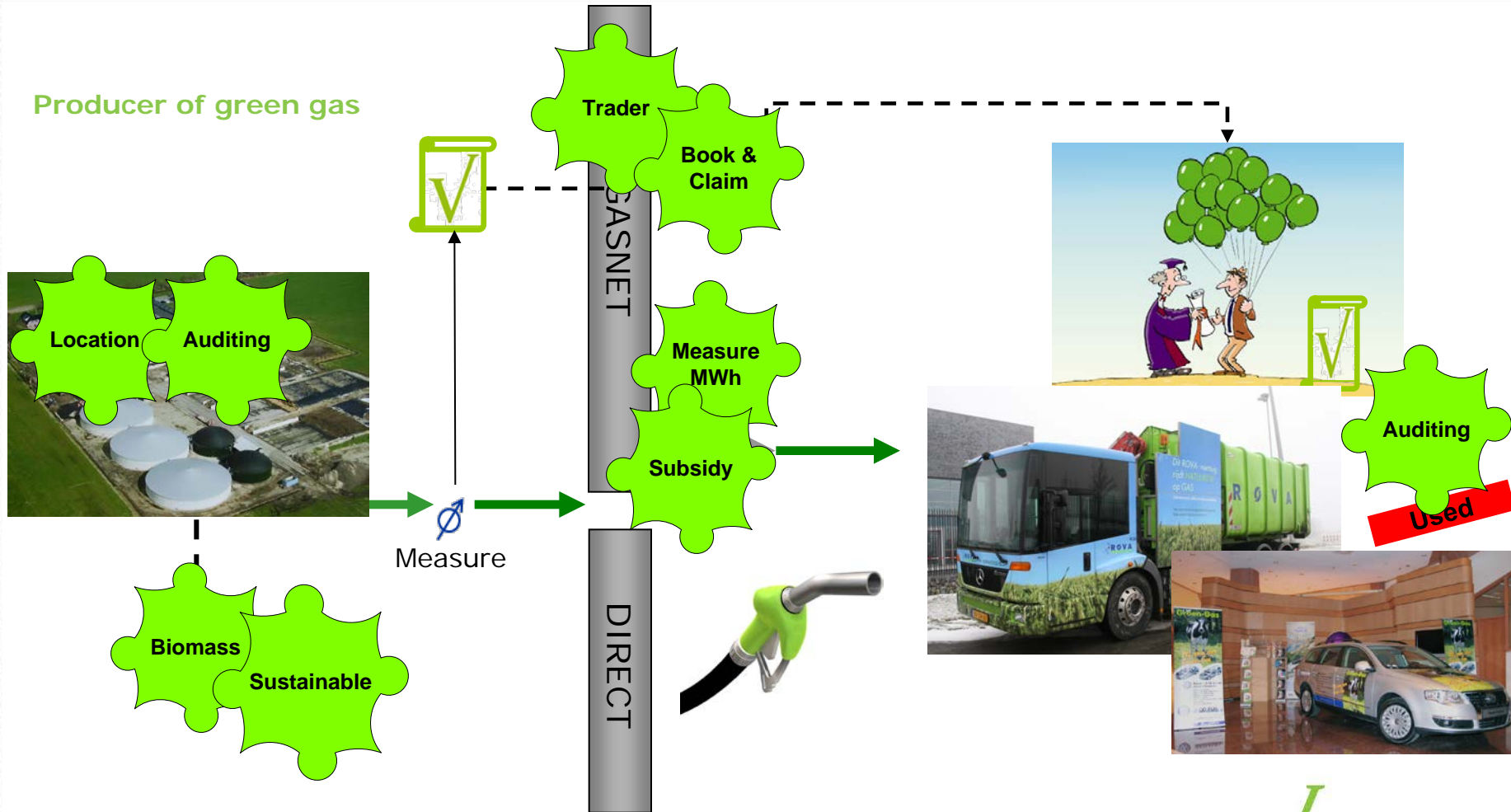
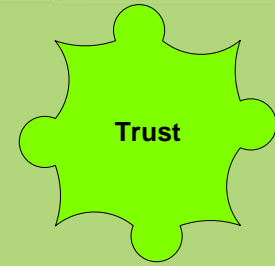
# Vertogas Stakeholder framework



- GvO Policy by Dutch Ministry Economic Affairs
- Grid Operators
  - Dutch Gas Law
  - Approval by Grid Operator
  - Gas Quality Parameters
  - Independent measurement responsibility
  - Independent data delivery to Vertogas



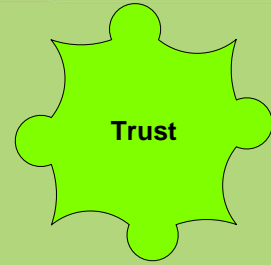
# Building blocks for national trust



# Dutch GVO Example

|   |                       |                  |             |         |           |                |
|---|-----------------------|------------------|-------------|---------|-----------|----------------|
| Certificate serie (2013.04.04.000662)                           |                       |                  |             |         |           |                |
| <b>Certificate information</b>                                  |                       |                  |             |         |           |                |
| Renewable energy source   | Sugar preparation     |                  |             |         |           |                |
| Net Value (MWh)   | <Amount>              |                  |             |         |           |                |
| Status  | Active/Cancelled      |                  |             |         |           |                |
| Issuing Date  | 5-4-2013              |                  |             |         |           |                |
| Expiration Date   | 5-4-2014              |                  |             |         |           |                |
| Issuing body  | Vertogas              |                  |             |         |           |                |
| Issuing country   | Netherlands           |                  |             |         |           |                |
| SDE subsidized  | YES/NO                |                  |             |         |           |                |
| Renewable Biomass Basis   | NEN: NTA 8080         |                  |             |         |           |                |
| Destination Clause  |                       |                  |             |         |           |                |
| <b>Production device information</b>                            |                       |                  |             |         |           |                |
| Name  | <Production_Device>   |                  |             |         |           |                |
| EAN-code  | <EAN-code>            |                  |             |         |           |                |
| Address   | <Address>             |                  |             |         |           |                |
| Postal code   | <Postal code>         |                  |             |         |           |                |
| City  | <City>                |                  |             |         |           |                |
| Country   | Netherlands           |                  |             |         |           |                |
| Production capacity   | <Capacity>            |                  |             |         |           |                |
| Production device type  | Fermentation other    |                  |             |         |           |                |
| Commission date   | 1-10-2012             |                  |             |         |           |                |
| <b>Green Gas Installation information</b>                       |                       |                  |             |         |           |                |
| Name  | <Name>                |                  |             |         |           |                |
| Grid Injection Points   | <Number>              |                  |             |         |           |                |
| Upgrading devices   | <Number>              |                  |             |         |           |                |
| Production devices  | <Number>              |                  |             |         |           |                |
| <b>Production information</b>                                   |                       |                  |             |         |           |                |
| Production start date   | 1-1-2013              |                  |             |         |           |                |
| Production end date   | 31-1-2013             |                  |             |         |           |                |
| Bruto value percentage  | 100%                  | Percentage       |             |         |           |                |
| Renewable energy source   | NTA Classificatie     | Percentage       |             |         |           |                |
|   | 532 - Suikerbereiding | 55%              |             |         |           |                |
|   | 533 - Bietenpulp      | 45%              |             |         |           |                |
| <b>Sustainable biomass information (for transport delivery)</b> |                       |                  |             |         |           |                |
| Identification sustainability schem                             | <Identification>      |                  |             |         |           |                |
| Issuing date  | <Date>                |                  |             |         |           |                |
| Expiration date   | <Date>                |                  |             |         |           |                |
| Renewable energy source   | <Biomass ID>          |                  |             |         |           |                |
| Country of origin   | <Country>             |                  |             |         |           |                |
| Sustainability scheme   | <Scheme>              |                  |             |         |           |                |
| Greenhouse gas emission chain (gCO2/MJ)                         | <Amount>              |                  |             |         |           |                |
| Additional information  | <Free text>           |                  |             |         |           |                |
| <b>Certificate history</b>                                      |                       |                  |             |         |           |                |
| Date  | Serial number         | Transaction type | From Trader | Account | To Trader | Account Amount |

# Building blocks for multiple market outlets



## Via Grid Delivery



- Households
- Industry Feedstock
- Transport (greenCNG)

## Via Non-Grid Delivery



- Power & Heat
- Transport (greenCNG)
- Transport (greenLNG)

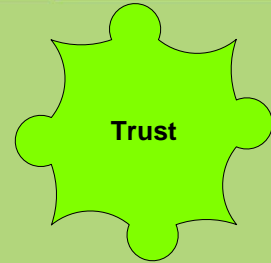
## Future Developments



- Power to Gas
- Green Hydrogen

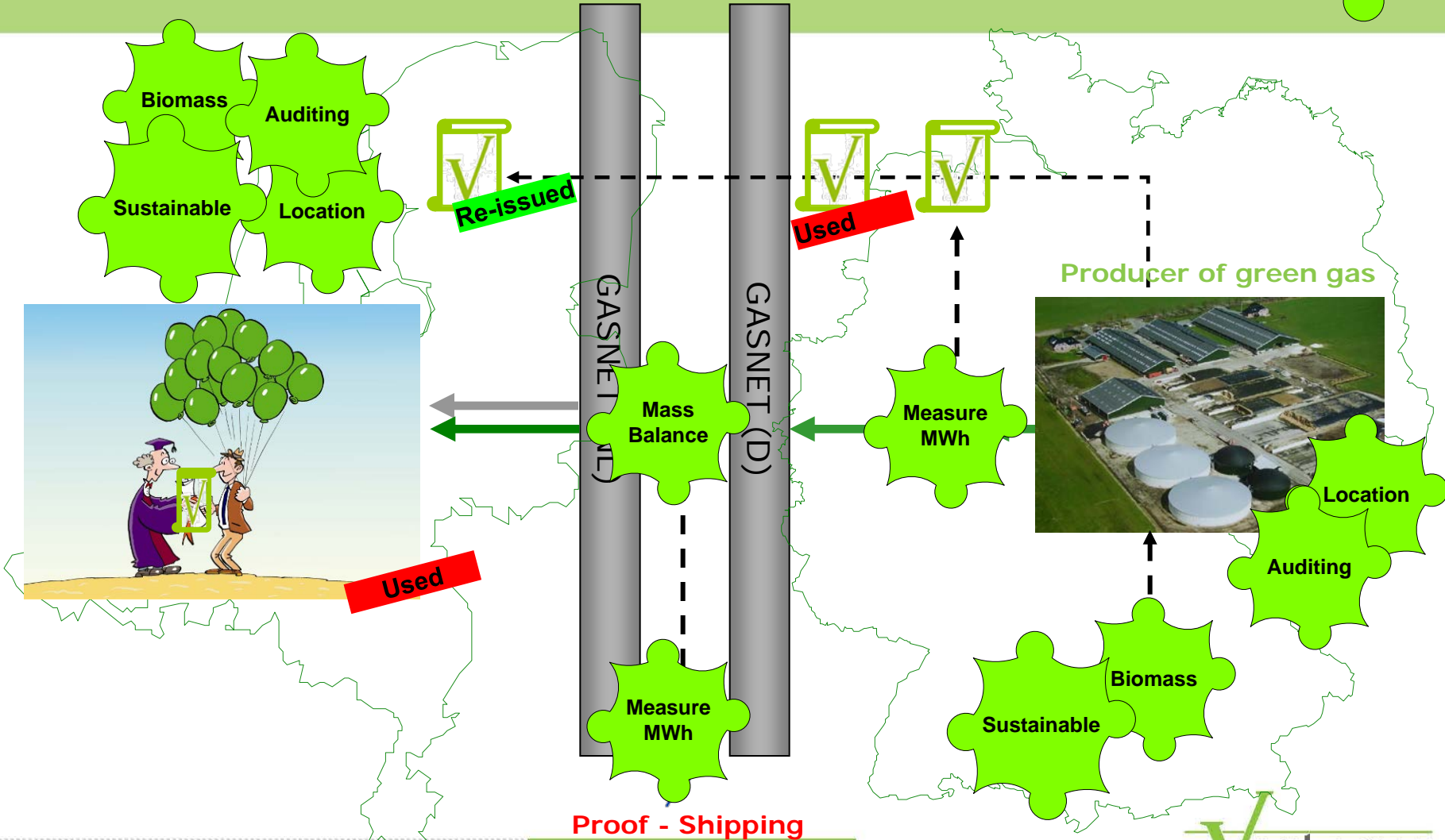
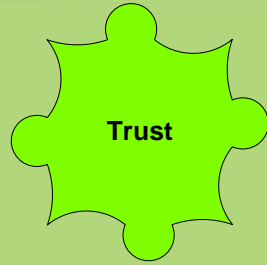


# Building blocks for international trust



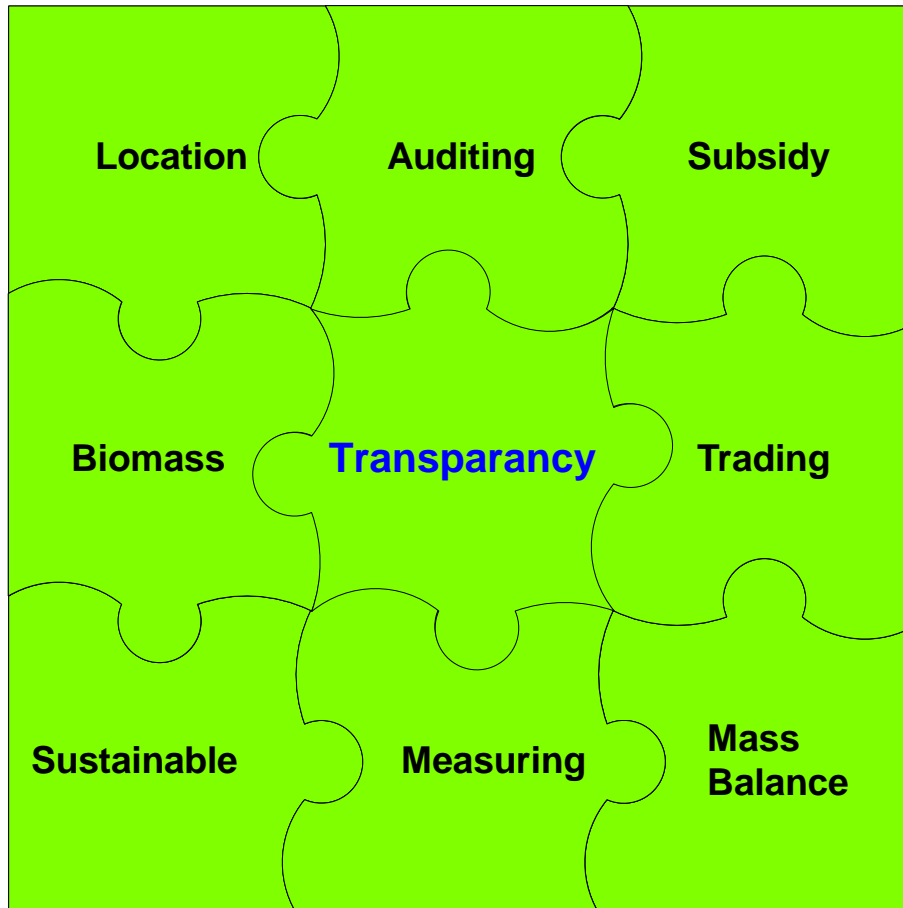
- Internationalisation is complex:
  - Different certification authorities (various countries)
  - Different certificates (varying degrees of information)
  - Different incentives (varying degrees of green gas value)
  - Various sustainability criteria (difference in sustainability claims and use of GoO)
  - Various control and audit rules (difference in confidence)

# Issuing guarantees of origin internationally



# Solving the Puzzle

Transparency



The binding factor for confidence in a market for green gas (certificates) is a fully transparent view of all relevant information across the green gas value chain.

# Renewables are entering a new era of global trading



Transparent International certification systems will ensure customer's trust and safeguard superior value generation for producers.

**Thank you for your attention !**

Questions?



Bron: Website Groningen geeft Groen gas