Innovative power with Better Biomass chains

Future value & closing chains

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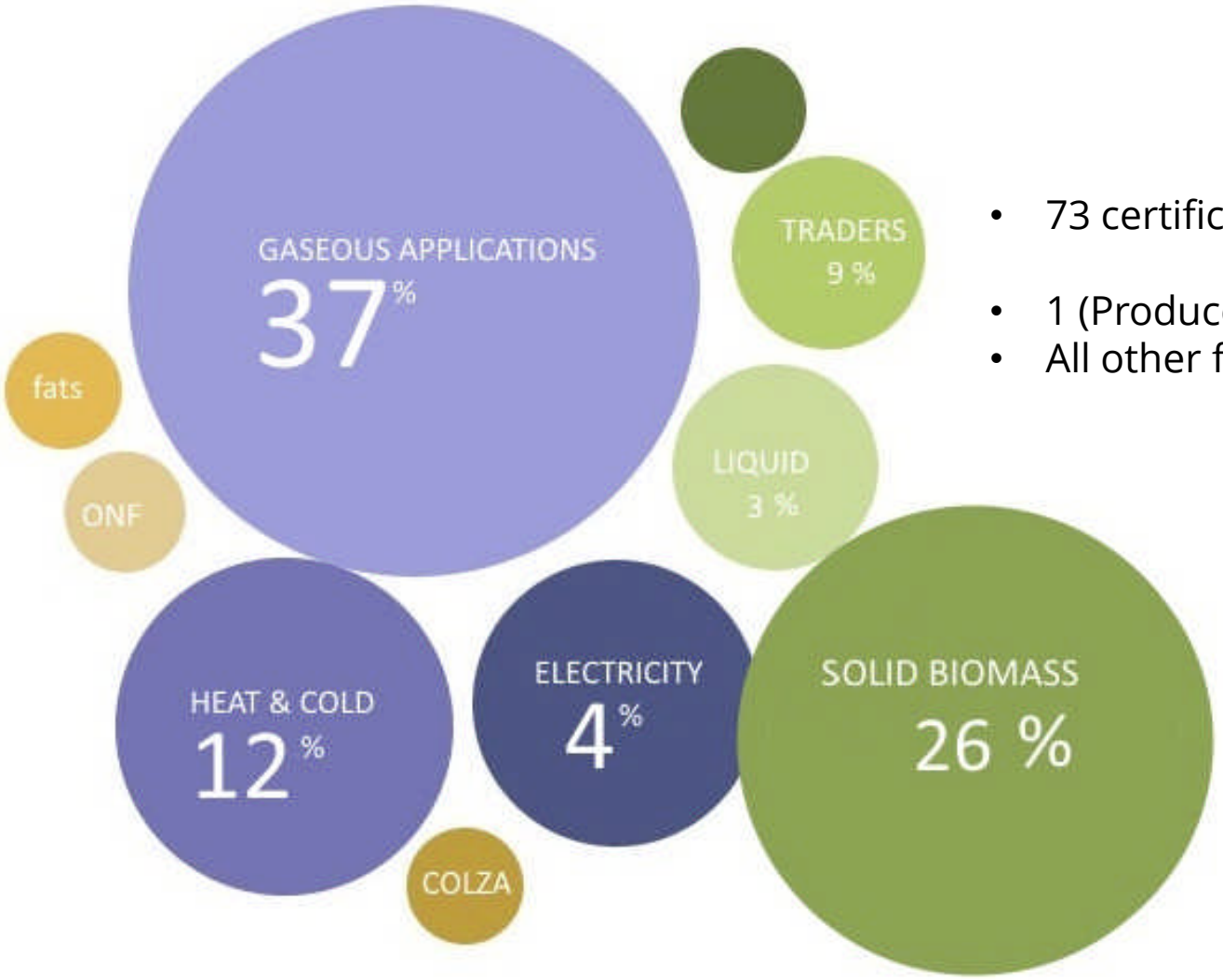
Setup

- Current scheme users
  - Residuals vs. producers
  - End-users in differentiated products
- Developing landscape for biomass certification
  - Markets
  - Policy
- Example case – thought experiment

Current state BB Certificate Holders



- 73 certificatie holders

- 1 (Producer A1)
- All other from waste & residues

Developing landscape

- **Policy** influences on the Better Biomass certification
  - **SDE+ and Verification protocol**
  - **Paris Accord & REDII**
  - **Double counting & FQD**
- **Market**

  - Alternative exchange (a.o. intraday)

SDE+ & Verification Protocol

- Pilot for digestion of manure
- Pilot for Verification protocol of solid biowaste (co-firing)

Double Counting & FQD

Transport in Europe is 94% dependent on oil, 84 % of it is imported

The EU crude oil import bill is estimated at **around €187 billion a year**

Road transport alone is responsible for **almost a fifth of EU emissions**.

Role of Biomass in REDII

↓ 2009/28/EC Recital 24
(adapted)
⇨ new

(68) In order to exploit the full potential of biomass ⇨ to contribute to the decarbonisation of the economy through its uses for materials and energy ⇦ , the ~~Community~~ ⌦ Union ⌫ and the Member States should promote greater ⇨ sustainable ⇦ mobilisation of existing timber ~~reserves~~ ⇨ and agricultural resources ⇦ and the development of new forestry ⇨ and agriculture production ⇦ systems.

↓ 2009/28/EC Recital 65
(adapted)
⇨ new

(69) ~~Biofuel production should be sustainable.~~ Biofuels ⇨ , bioliquids and biomass fuels should always be produced in a sustainable manner. Biofuels, bioliquids and biomass fuels ⇦ used for compliance with the ⌦ Union ⌫ target~~s~~ laid down in this Directive, and those ~~that~~ ⌦ which ⌫ benefit from ~~national~~ support schemes, should therefore be required to fulfil sustainability ⇨ and greenhouse gas emissions savings ⇦ criteria.

Role of Biomass in REDII

⇩ new

Biomass fuels shall have to fulfil the sustainability and greenhouse gas emissions saving criteria set out in paragraphs 2 to 7 only if used in installations producing electricity, heating and cooling or fuels with a fuel capacity equal to or exceeding 20 MW in case of solid biomass fuels and with an electrical capacity equal to or exceeding 0.5 MW in case of gaseous biomass fuels. Member States may apply the sustainability and greenhouse gas emission saving criteria to installations with lower fuel capacity.

The sustainability criteria set out in paragraphs 2 to 6 and the greenhouse gas emissions saving criteria set out in paragraph 7 shall apply irrespectively of the geographical origin of the biomass.

GHG Emission targets

⇩ new

7. The greenhouse gas emission saving from the use of biofuels, bioliquids and biomass fuels taken into account for the purposes referred to in paragraph 1 shall be:

(a) at least 50 % for biofuels and bioliquids produced in installations in operation on or before 5 October 2015;

(b) at least 60 % for biofuels and bioliquids produced in installations starting operation from 5 October 2015;

(c) at least 70 % for biofuels and bioliquids produced in installations starting operation after 1 January 2021;

(d) at least 80 % for electricity, heating and cooling production from biomass fuels used in installations starting operation after 1 January 2021 and 85% for installations starting operation after 1 January 2026.

An installation shall be considered to be in operation once the physical production of biofuels or bioliquids and of heating and cooling, and electricity for biomass fuels has started.

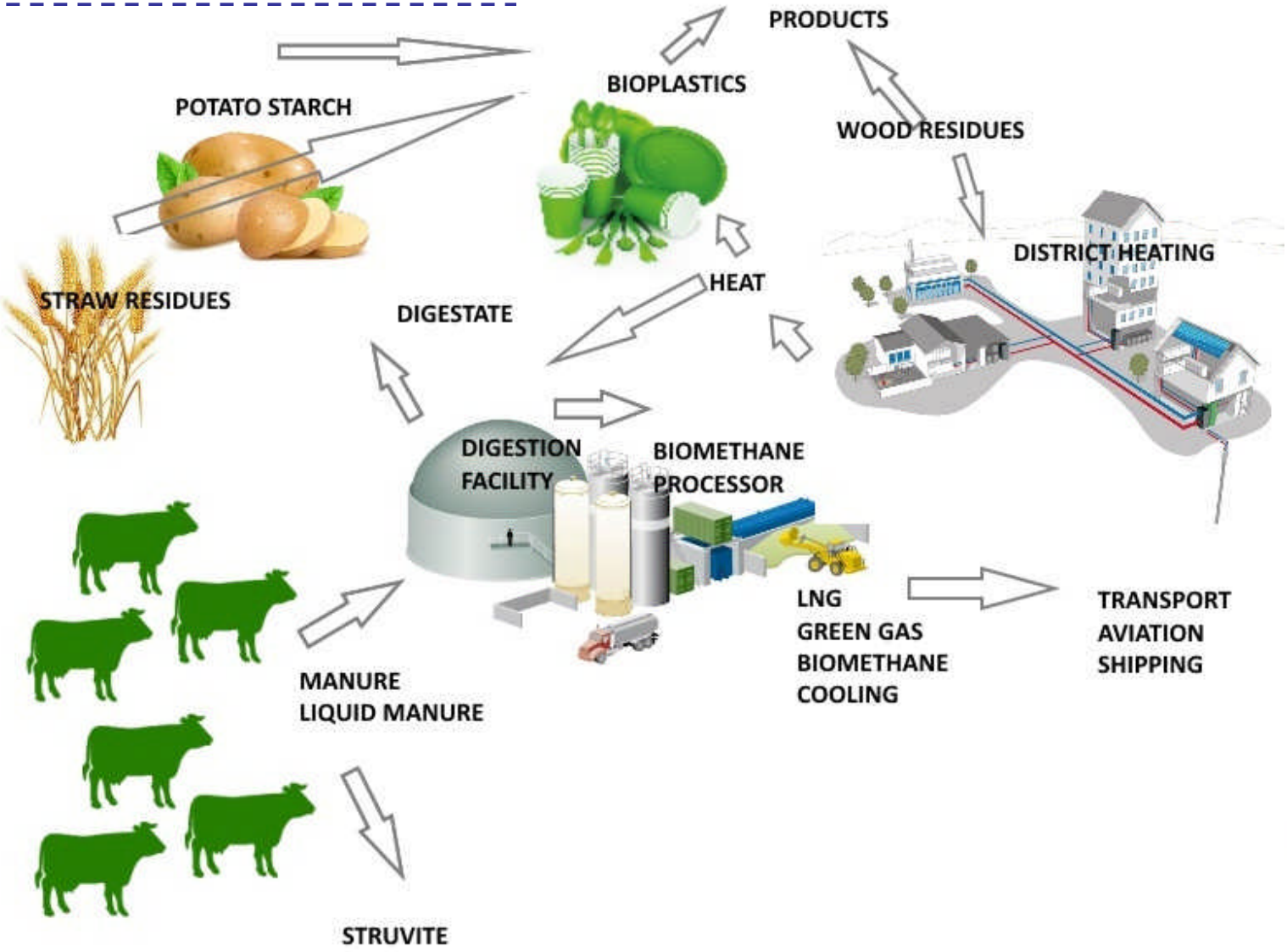
Comparison

Product	Application	Reference greenhouse gas emission of fossil fuel CO_{2eq}/MJ	Minimum greenhouse gas emission saving relative to reference fossil fuel	Installations after 2021
Biofuel	Transport	83,8 g [a]	50 %	70%
Bioliquid	Electricity	91 g [b]	60 % for installations in which production started on or after 5 October 2015 [d]	
	Heating	77 g [b]		
	Cogeneration	85 g [b]		
Solid or gaseous biomass	Electricity	186 g [c]	60 %	80%
	Heating	80 g [c]	and 70 % as annual average for solid biomass [e]	
	Cooling	47 g [c]		
Gaseous biomass	Feed into gas grid	72 g [c]	60 %	undefined yet

Sustainable chains

- Added value of Better Biomass certification
  - Transparency of sources of origin;
  - Trust and traceability in the chains;
  - Creating broad support (societal context);
  - European aknowledged methodology to comminicate GHG-reduction and CO2 values;
  - Ready for ILUC and Cascading.

Example case



Sustainable Energy & Materials

- NTA 8080 Better Biomass certification of sustainable origin
- Verification Double Counting / REV Register
- SMK Milieukeur Groene elektriciteit
- ISCC (+)
- CO_2 reduction certificates
- Origin and life cycle in the circular econnomy

Waste & Recycling






- Inspectie folieconstructies, minerale constructies en combinatie afdichtingen
- Durability of foil,
- Geosynthecic and plastic in construcions
- Inspection of liquidtight facilities

Road & civil engineering

- Inspectie folieconstructies GWW
- Inspectie IBC Bouwstoffen
- Inspectie kunstwerken
- Inspectie staal
- Levensduurtesten folie

Infrastructure

- Inspecties aanleg leidingsystemen
- Mechanisch beproeven PE-lassen
- Opleiding, examen en certificatie PE-lasser
- Levensduuronderzoek
- Schade-onderzoek

Questions

Want to share & pre-test your ideas ?

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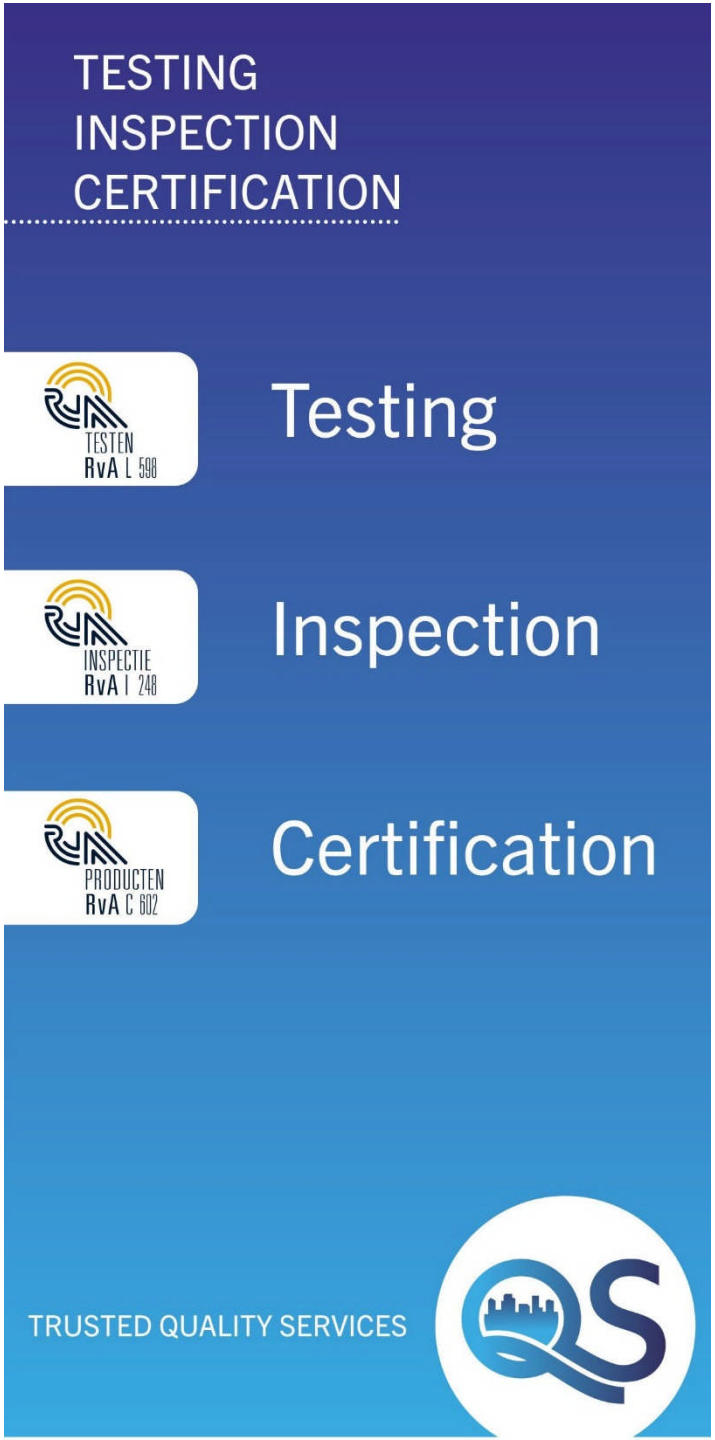


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