



BIOMETHANE FOR EUROPE

John Cosmo Dwelle | Landwärme GmbH
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KEY FACTS ON THE LANDWÄRME GROUP – EUROPE'S BIOMETHANE EXPERT



2007
Foundation



Munich, Berlin,
Dortmund & Budapest



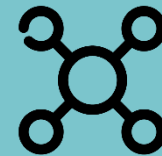
10+
European Countries



250+
Energy Utilities
in Supply

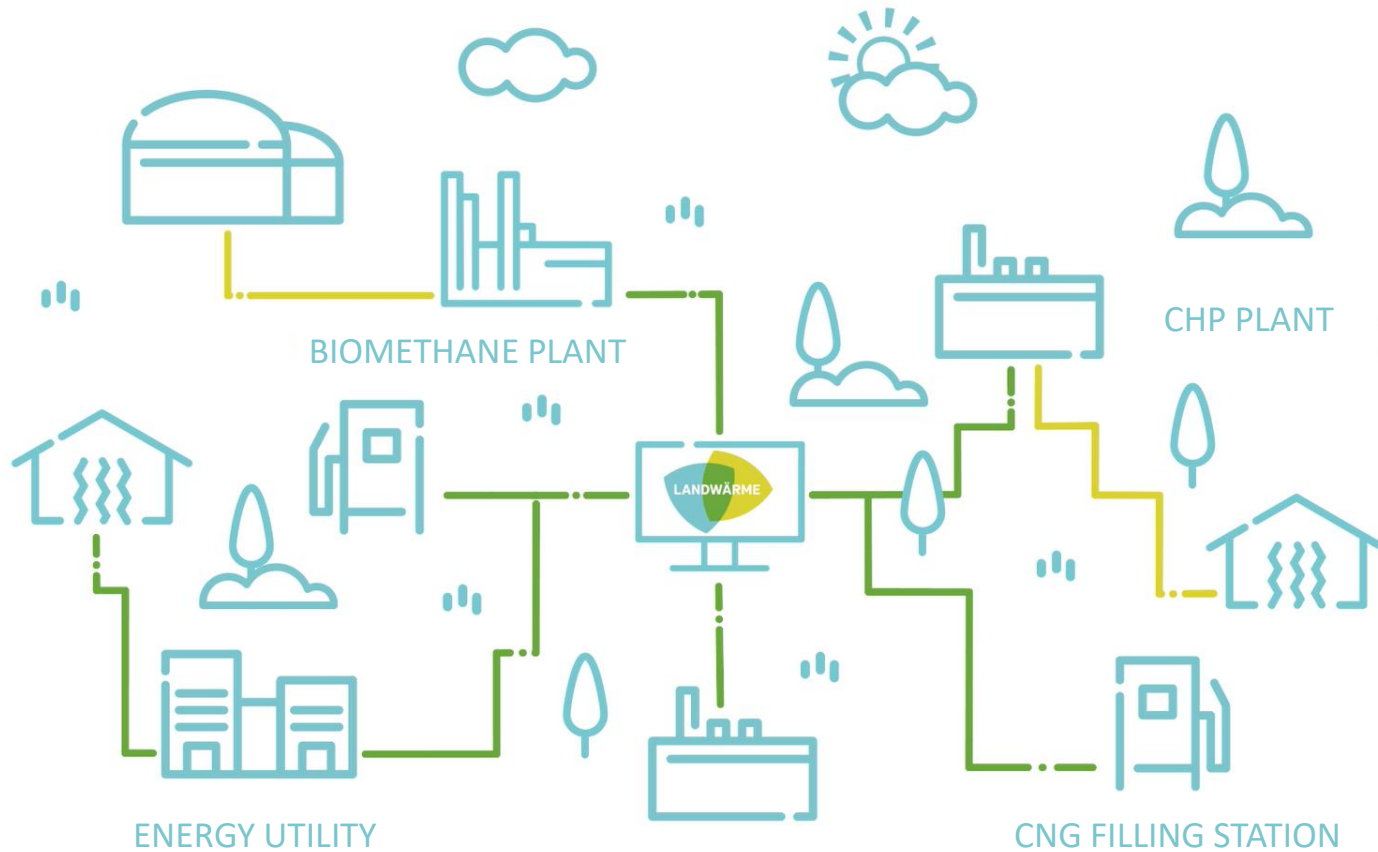


90+
Biomethane
Pre-Suppliers



3+ TWh
Trading Portfolio

OUR ROLE IN THE VALUE CHAIN



BIOMETHANE
PRODUCTION

TRADING

SERVICES

A photograph of a dirt path winding through a field of tall, golden-brown grass. A small rainbow is visible on the path. A semi-transparent teal banner is overlaid on the bottom half of the image.

BIOMETHANE MARKET

FIELDS OF APPLICATIONS FOR BIOMETHANE



HEATING SECTOR

Blending of biomethane – eco gas applications



BIOFUEL SECTOR

Biomethane for fuelling natural gas vehicles



COMBINED HEAT AND POWER GENERATION

Biomethane for electricity production and heat in CHP-units

A photograph of a dirt path winding through a field of tall, golden-brown grass. A small rainbow is visible in the distance on the path. A semi-transparent teal banner is overlaid on the bottom half of the image.

BIOMETHANE IN THE FUEL SECTOR

BIOMETHANE AS FUEL HAS A BIG POTENTIAL



350+ biomethane
production sites with over
20 TWh p.a.



Biomethane: high GHG
saving potential through
manure and CO₂ usage



Biomethane from waste is
often the cheapest
renewable option for the
quota



Additional potential:
e.g. Germany: 70 TWh
biogas production



Gas grid available as
infrastructure in Europe



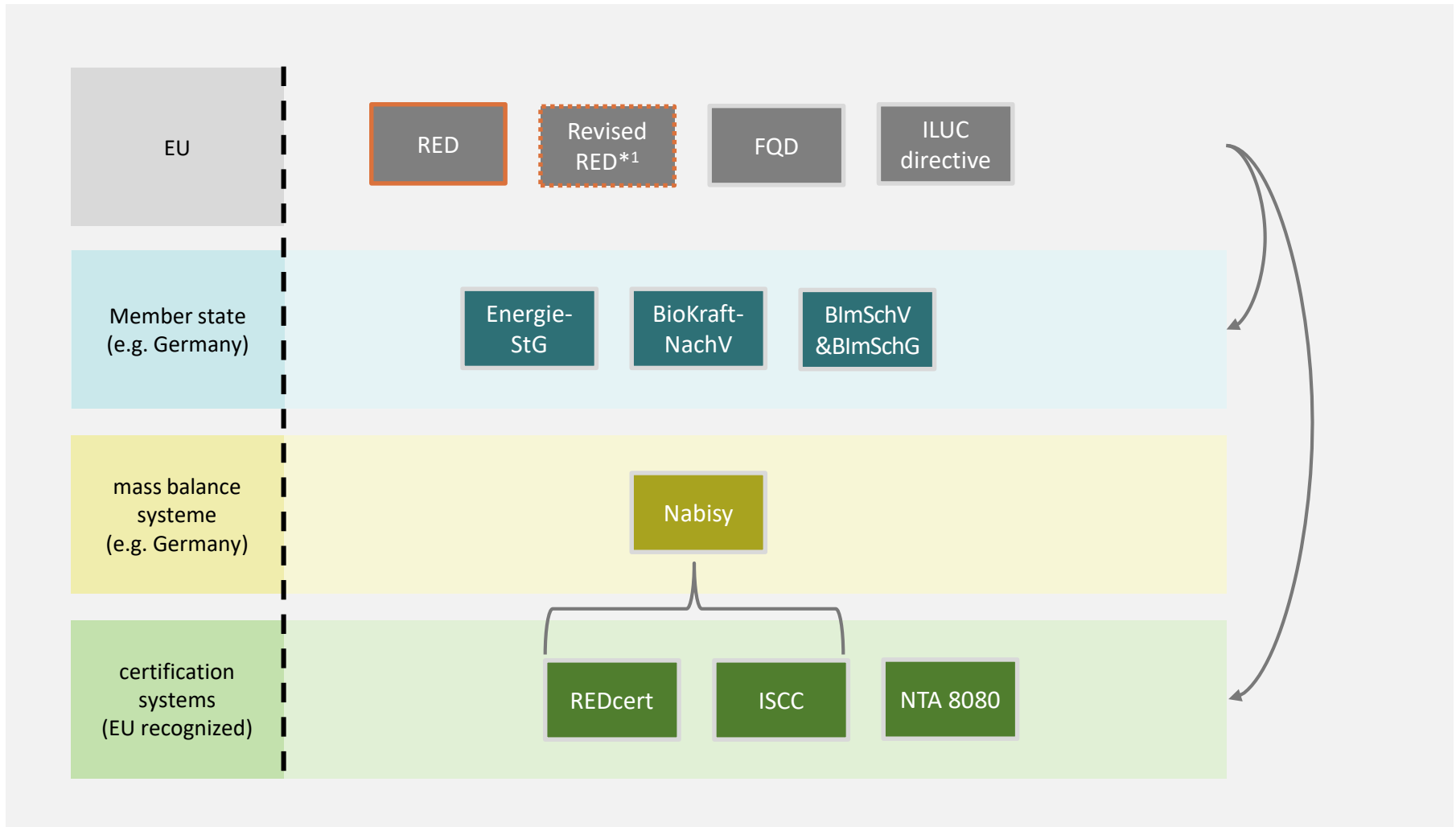
CNG / biomethane cars
with low NO_x and
particles emissions



CERTIFICATION OF BIOMETHANE IS OF UTMOST IMPORTANCE



MULTI LEVEL REGULATION LEAD TO COMPLEX REGULATION



BUT BIOMETHANE STILL PLAYS A NICHE ROLE IN THE EUROPEAN BIOFUEL MARKET



FEW COUNTRIES WITH RELEVANT SHARE OF CNG BASED MOBILITY

- Italy
- Germany
- Sweden
- Netherlands
- UK



REGULATION PUTS SEVERAL HURDLES ON BIOMETHANE AS FUEL

- Import restrictions
- Prohibition of „animal fats“ in Germany since 2012 lead to vegan biomethane
- Complex regulation and certification



A scenic landscape photograph showing rolling green hills under a bright sun setting or rising over a valley. The sun is low on the horizon, casting a warm glow over the scene. The hills are covered in lush green grass and some yellow wildflowers are visible in the foreground.

CROSS-BORDER TRADING

WHY?



New Renewable Gas Projects



Renewable Gas Availability



Scale & Liquidity



Existing Infrastructure

IMPORTING BIOMETHANE FOR USAGE AS FUEL – REASONS AND EFFECTS



DEMAND FOR BIOMETHANE AS A FUEL HIGHER THAN PRODUCTION

- Insufficient sustainability-certified biomethane in most countries
- Only 25 % biomethane usage at CNG filling stations in Germany
- No biomethane usage at CNG filling stations in Italy

IMPORTING ENERGY & ESPECIALLY BIOENERGY IS NOTHING NEW

E.G. GERMAN IMPORT QUOTAS

- Fossil oil: 98 % | natural gas: > 90 %
- Biofuels: > 70 % & waste based biofuels: > 80 %

IMPORTING BIOMETHANE WOULD HAVE NO EFFECTS ON LOCAL PRODUCTION

- 98 % of the biogas plants produce electricity and are not effected
- Germany: 90 % of the plants produce biomethane from energy crops for EEG usage
- Cost advantages for German producers (0.7 ct/kWh avoided grid cost & cost split for grid connection & LPG)

IN JUNE 2017 HOPE ARISES: ECJ RULED ON IMPORTING BIOMETHANE



- European Court of Justice ruled in case C-549/15 (Sweden vs. E.ON Biofor Sverige)

“If transportation via the gas grid is accepted as a mass balance system,
the mass balance system may not be limited to national borders.”

IN OUR OPINION, MEMBER STATES NOW HAVE 2 OPTIONS:

Accept foreign biomethane if it is certified by a system recognized by the commission (e.g. REDcert or ISCC)

vs. Exclude transportation via the gas grid from the mass balance (would be the end for domestic biomethane as well)

BUT IMPORT RESTRICTIONS FOR BIOMETHANE ARE STILL IN PLACE IN MAIN MARKETS



NETHERLANDS



- Import not possible for technical reasons
- Foreign producers cannot be registered in the mass balance system Vertogas

GERMANY



- Import for biofuel quota possible, but...
- Transportation of biomethane at border to GER shall not be done via the gas grid (truck?)

ITALY



- Import is possible, but...
- Bilateral agreement is needed based on principle of mutual import and export

AT THE SAME TIME FIRST MARKETS OPEN UP



NETHERLANDS



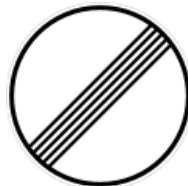
- Work around in the Netherlands
- Biomethanol produced from imported biomethane is accepted for the quota

UNITED KINGDOM



- Import for RTFC (Renewable Transport Fuel Certificates) started in 2016 / 2017
- Double Counting for waste based biomethane

SWEDEN



- Import for quota & tax reduction officially possible since 2017 (import started already 2013)
- Reason: ECJ ruling against Sweden

CURRENT ARGUMENTS AGAINST IMPORT



Let's wait
for a
European
solution



“Zollgrundsatz
beim
Grenzübertritt“



“Beprobung”
product testing
impossible



Fear of fraud:
Double sales,
Double subsidy,
Double counting
into statistics



Protection of
domestic
production



“Nämlichkeit”
product's
identity gets lost
at feed-in

FACILITATION OF GREATER CROSS BORDER TRADE



EXTENSION OF GUARANTEES OF
ORIGIN TO RENEWABLE GASES (RED II)



EUROPEAN MASS BALANCE SYSTEM
(ERGAR)



CROSS BORDER COOPERATION



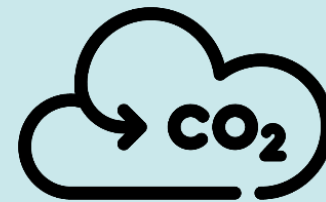
FORWARD THINKING



OUTLOOK



RED II



GAS FOR CLIMATE



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