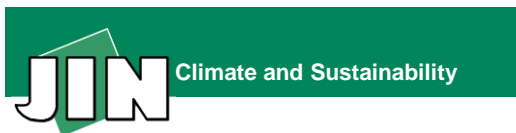


“A level playing field for the European biogas and green gas markets”

Side-Event Energy Convention Groningen,
19 November 2014



Project background

- Possibilities for **cross-border trading**
- Influence of national institutional differences on **competition**.
- **Optimising and fine-tuning** (remove market distortions for cross-border trade and avoid inefficiencies).



National differences (overview)

1



Natural gas network

2



Electricity grid

3



Support schemes

4



Biofuel trade in transport

5



Guarantees of origin

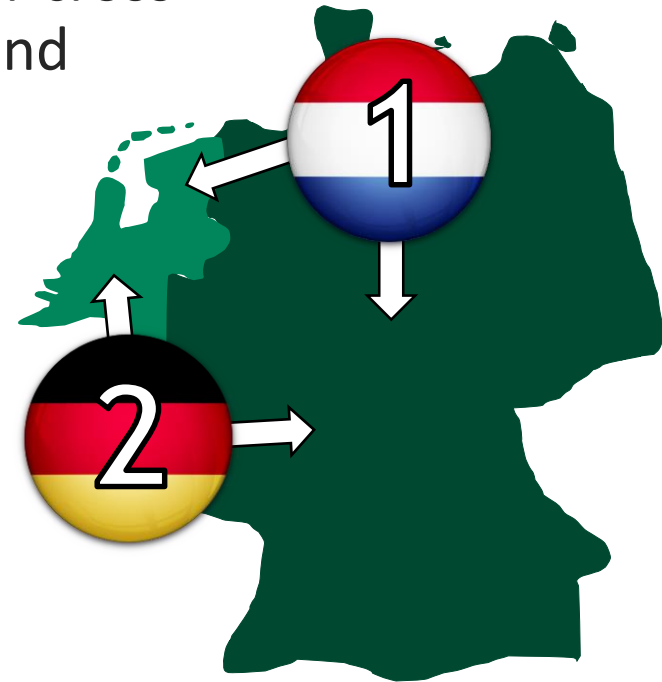
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Sustainability certification

Convergence framework

- Institutional differences can create market inefficiencies
- “Is full policy harmonisation beneficial for cross-border trade between the Netherlands and Germany?”
- 2 Convergence scenarios (full harmonisation)
 - Which market stakeholders gain and lose from convergence?



Convergence scenarios: some results (1)

German Regime		Dutch Regime
<i>Direct stakeholders</i>		
Biomass producer	Higher demand for primary biomass (but scarcely available arable land)	-
Biomass traders and shippers	-	-
Biomethane producers 	Lower investment burden. Higher feed-in support levels, and longer duration of support.	Competitive bidding, and higher cost-effectiveness, but also higher investment burden and lower support levels.
Biomethane traders and shippers 	-	Stricter balancing requirements. New revenue opportunities because of 'GoO flexibility'.
Network operators	Higher CAPEX/OPEX (gas) Distributing EEG funds (electricity)	-

Convergence scenarios: some results (2)

	German Regime	Dutch Regime
<i>End users</i>		
Electricity / CHP producers	One single biomethane end-use option available	Multiple options
Industry	Administrative co-firing not possible under EU ETS	
Transport	Monthly switching between feed-in and quota blending schemes possible	No scheme switching flexibility
Households	-	-
<i>Indirect stakeholders</i>		
Investors →	Longer-term and more robust funding scheme	Higher project development risks (subsidy not certain)
Tax payers / energy users (society) →	Society pays for biomethane support via electricity 'Umlage' and higher gas transport costs	Society pays via levy on natural gas and electricity consumption
Government	Low control over total budget and allocation	More control over total budget and allocation

Impacts of full convergence

- Market efficiency (+)
 - Less institutional competition
 - More leveled playing field
- Cross border trade
 - Raw materials (-)
 - Biomethane and certificates trade (+ NL / - DE)
- Distributional impacts (Δ)
 - Allocating risk, costs and responsibilities
- Transitional impacts (Δ)
 - 'old' and 'new' regime projects

Distributional impacts

- **Amongst biomethane producers and network operators**
 - Investment burden
 - Balancing responsibility
- **In collecting and distributing funds for biomethane activities**
 - NL – levy for gas / electricity users
 - DE – EEG Umlage electricity and gas transport tariffs
- **Project development risk**
 - NL – all permitting and planning without certainty of subsidy
 - DE – certainty of subsidy

Transitional impacts

<i>Installation competition</i>	Old regime installations	New regime installations	Old adopt new?
NL	-	+	+
DE	+	-	-

- **Convergence transition will results in:**
 - Higher transaction costs for operating 2 regimes
 - Min. 12 to 20 years transitional period or existing facilities need to be compensated

Limitations of convergence analysis

- Full institutional convergence is a time consuming process
- No common renewable energy and climate target(s)
- Public funds / budgets are unlikely to be shared
- Both DE and NL schemes are stimulating production and provide only minimal scope for cross-border trade in biomethane and certificates
- So, other mechanisms and instruments (e.g. quota and title trade schemes) need to be developed if one wants to increase overall market efficiency.

Towards demand-side incentives

- **Cross-border trade increases allocative efficiency (*meet obligations at lowest cost level*)**
 - Production subsidies only benefit from allocative efficiency (competitive bidding) within national borders
- **A minimum level of institutional convergence is needed for effective and efficient cross-border trade**
 - Mass-balancing (NL-style)
 - Implement quota-title trade schemes (end-user/supply oriented – CO2-credits, Biotickets, GoOs, etc..)
 - Address 'old' versus 'new' regime competition (phase out EEG/SDE)
 - Harmonize positive lists, and grid-connection regimes
 - Sustainability certification

Alternatives to feed-in schemes?

- European Commission: subsidies to be phased out!
- Is there a real and promising alternative?

Instrument	Price (all-in)	'Green Value'	Energy price	x-times increase in 'Green Value'	When substitute for feed-in?
EEG (ref. facility)	0,67	0,42	0,25	-	-
SDE (ref-facility)	0,65	0,4	0,25	-	-
Guarantee of Origin	-	0,06	0,25*	6,7	60 EUR/MWh
EUA (direct emissions)	-	0,012	0,25*	33,3	215 EUR/tCO ₂
NL - Bioticket (single)	-	0,16	0,25*	2,5	21 EUR/ticket
NL - Bioticket (double)	-	0,32	0,25*	1,3	11 EUR/ticket
DE – Bioticket (single)	-	0,26 - 0,4	0,25*	1,7	-
DE – Bioticket (double)	-	0,53 - 0,79	0,25*	0,9	-

- Price stability and range?
- Long-term certainty?
- Supply – demand volumes?
- What share ends-up with producer (intermediaries)?



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Contact(s)

Eise Spijker
JIN Climate and Sustainability
Laan Corpus den Hoorn 300
9728 JT Groningen (NL)

phone: +31 (0) 50 524 8431
mobile: +31 (0) 6 2806 4653
email: eise@jin.ngo

www.jin.ngo

Martin Palovic
Jacobs University
m.palovic@jacobs-university.de

Linda Neubauer
University of Oldenburg
linda.neubauer@uni-oldenburg.de