Import van biomassa

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Projectgroep Biomassa & WKK

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BiomassConsultancy.com™

- Business partner collective
  - Trading strategies
  - Risk management tools
  - Project management
  - Logistic solutions
- Biomass industry and policy makers

BFP international

- Biomass commodity traders with roots in the agri-commodities sector.
- Utilizing trusted network of suppliers to source for sustainable and reliable biomass sources and supply chains.

- Involved in setting up vertically integrated supply chains for energy companies
- Trading in wood chips and wood pellets, palm kernel shells, oil press cake, oilseeds and vegoils
- Agencies in Indonesia, Brazil and Africa. Setting up JV in Ukraine.

Take Home Message

1. Biomass is an increasingly important energy source

2. Large scale biomass imports into the EU is needed to meet renewable energy ambitions

3. The Netherlands is in a perfect position to develop as a key player in the biomass trade

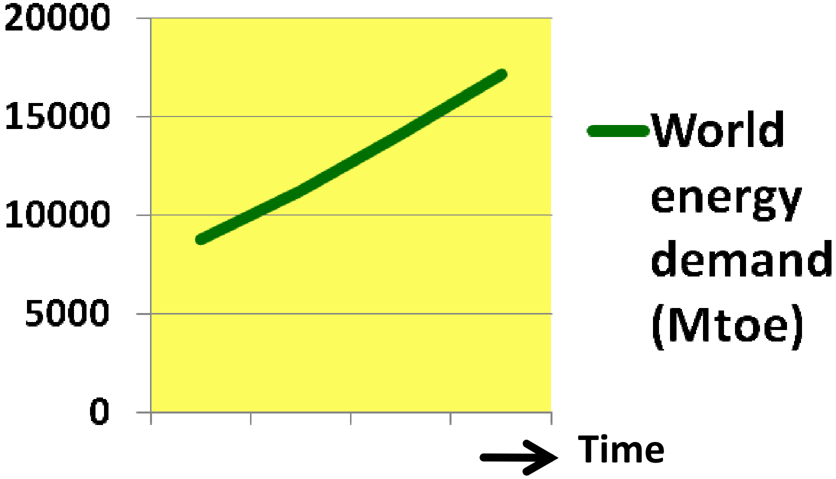
4. Biomass products are commodities!

1. Biomass use for energy

- Energy security
  - Economy
    - Greenhouse gas reductions

Energy security

- World energy demand



	World energy demand (Mtoe)	
1990	8732	8732
2007	12013	12013
2015	13488	
2030	16790	14389

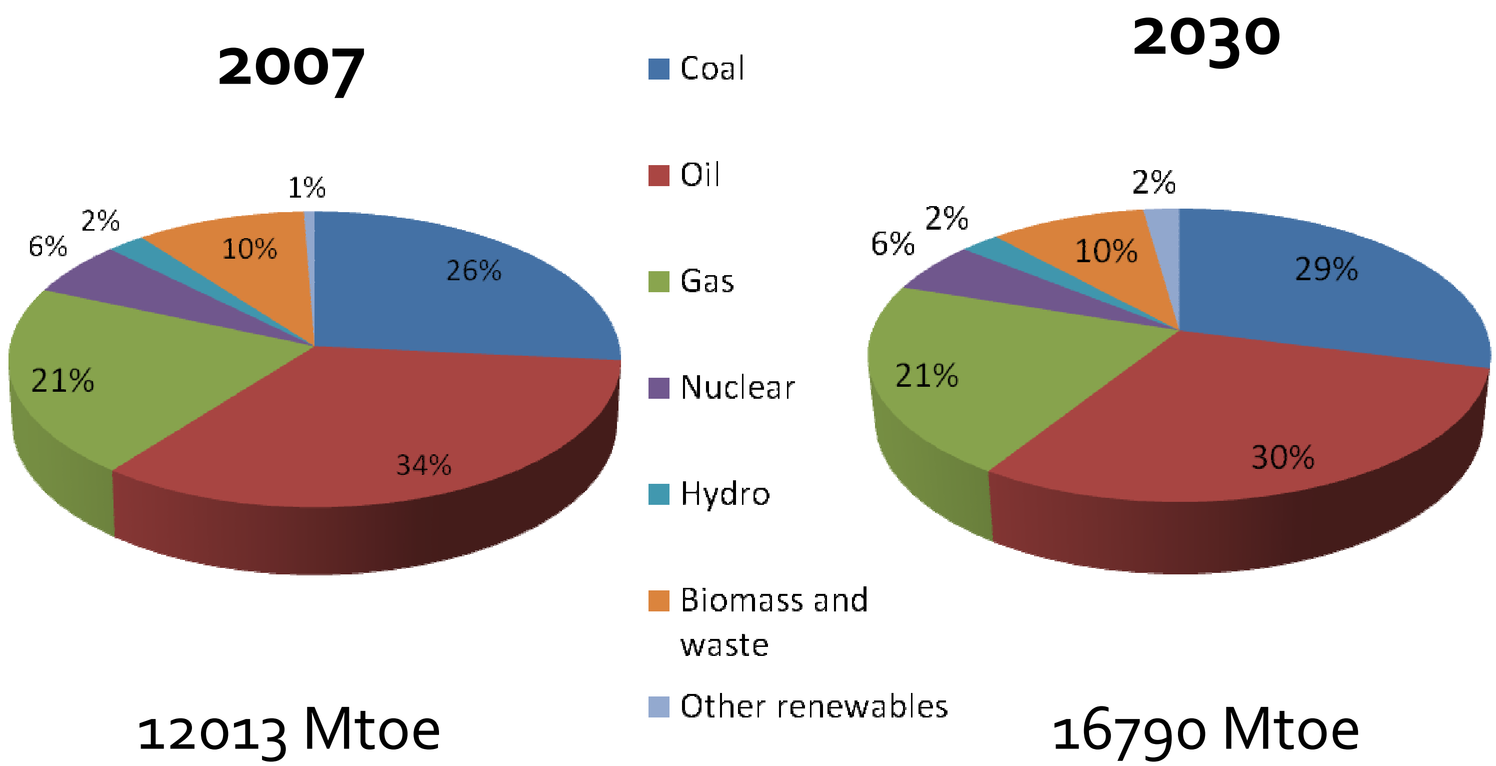
- **IEA** predicts a 20-40 % growth in demand between 2007 and 2030
- Over 90% of demand growth is from OECD countries
- EU demand remains at ~1700 Mtoe

WEO Outlook 2009

Source: IEA

BFP International

Energy sources



Biomass share up to 13,5 % in alternative energy scenario

WEO Outlook 2009

Energy security

- Geopolitical factors

EU: Renewable Energy Directive (RED)

US: Energy Independence and Security Act (EISA)

EU Renewable Energy Directive

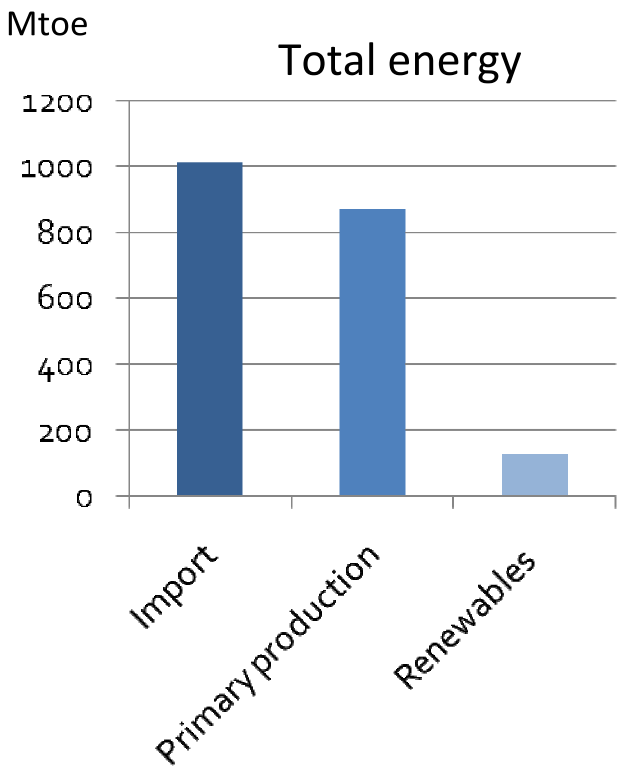
20% Renewable energy production
20% Energy efficiency
20% Greenhouse gas reductions

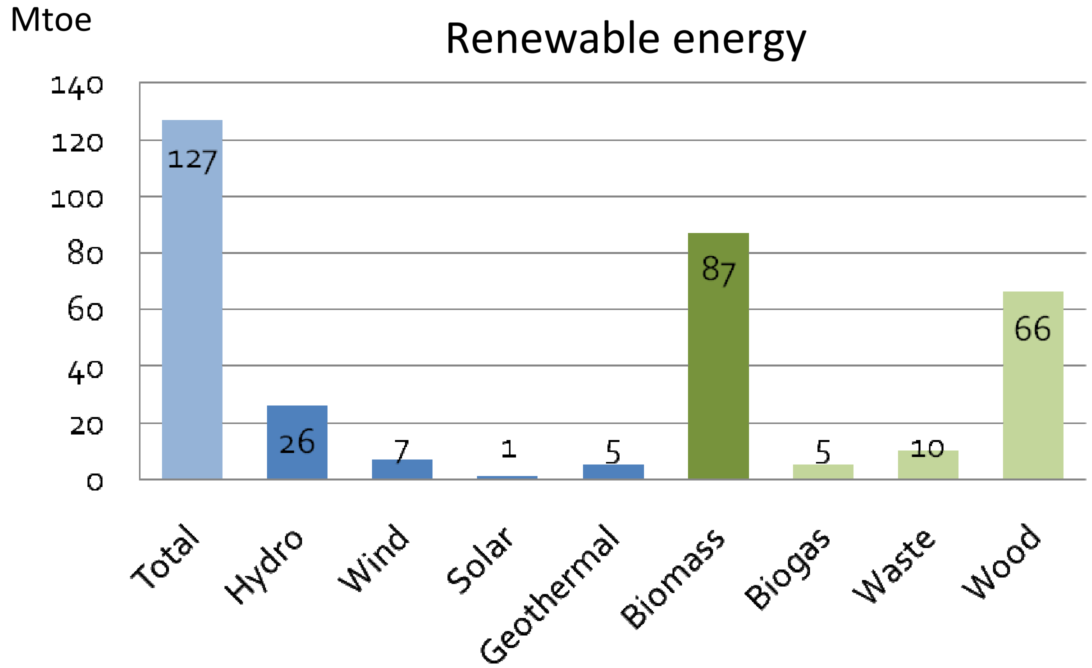
- Renewable energy: mandatory target
- Includes 10% biofuels
- Sustainability provisions

- 165 – 195 Mtoe biomass (6.9 – 8.2 EJ)

EC-Agri 2010 (GreenX/PRIMES model)

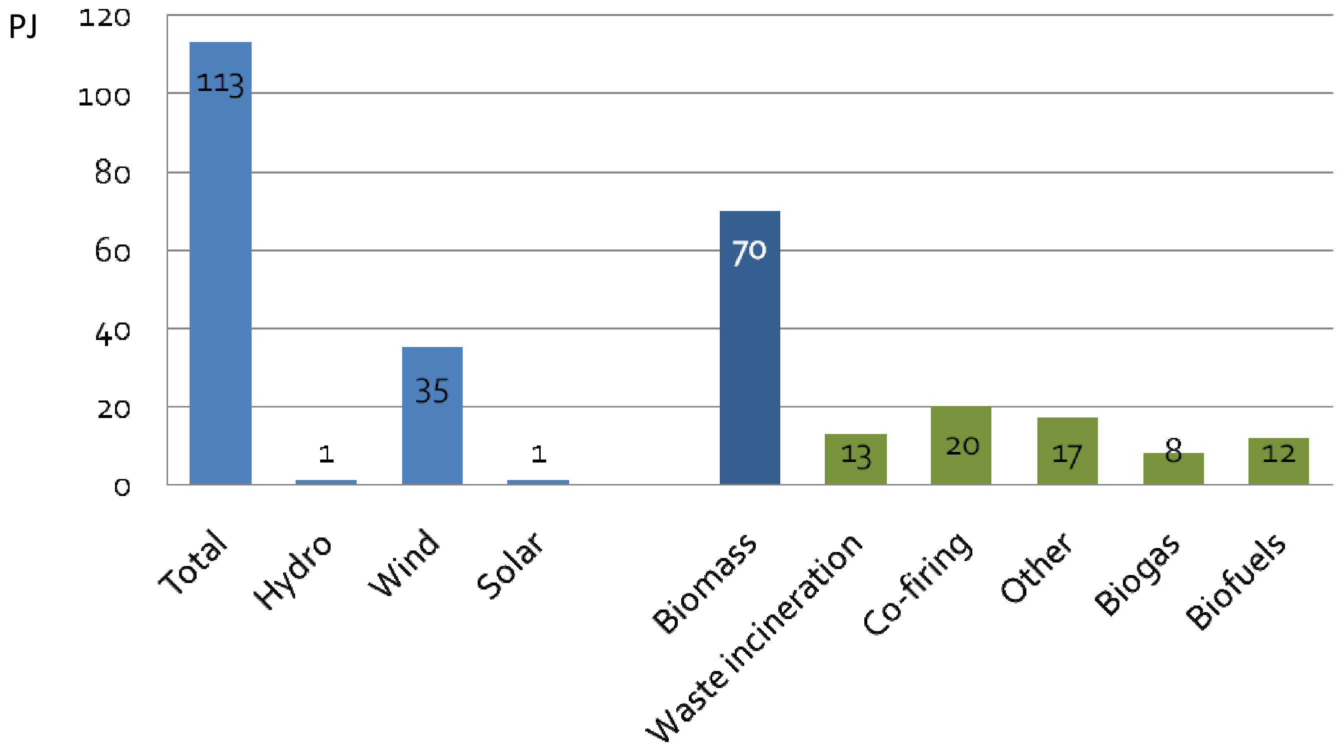
EU renewable energy production





Eurostat. 2006

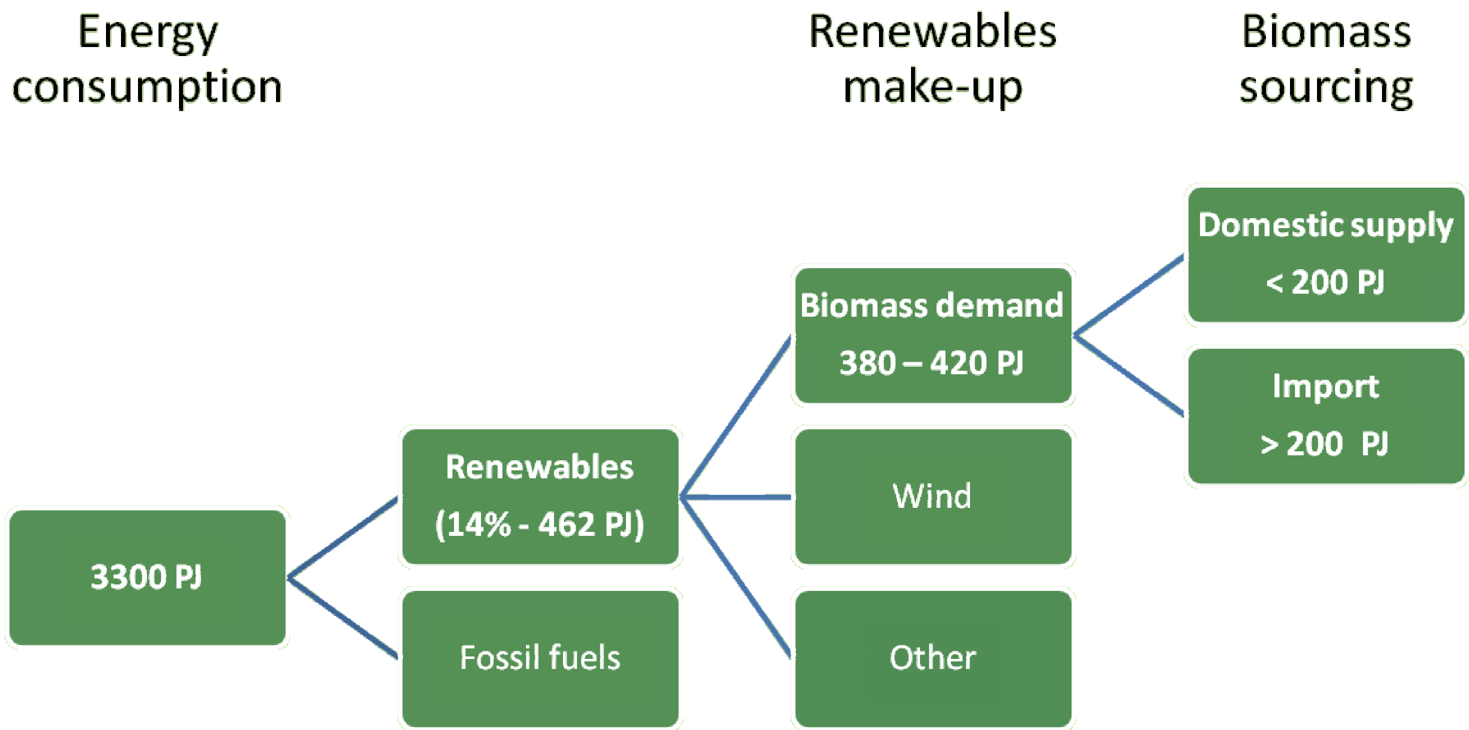
The Netherlands



- Renewable energy share is 3.4 % (2008)
- **Biomass main source for higher renewable energy production levels**

CBS. 2009

Biomass imports to secure energy supply



Economy

Rotterdam BioPort

Existing energy hub

Mineral oils and natural gas

Power stations

Trading companies

Chemical industry

Renewable energy

Biofuels

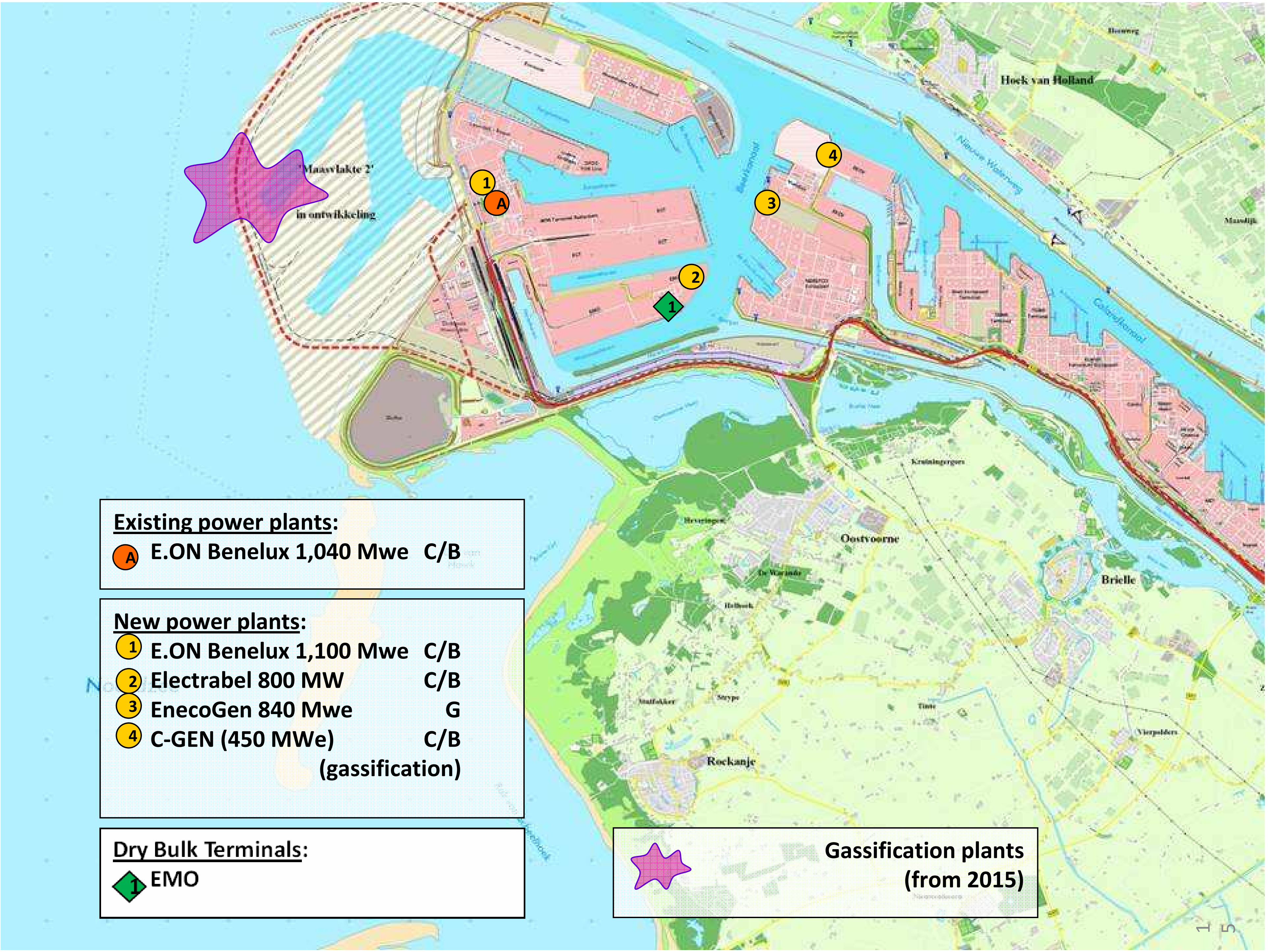
Co-firing

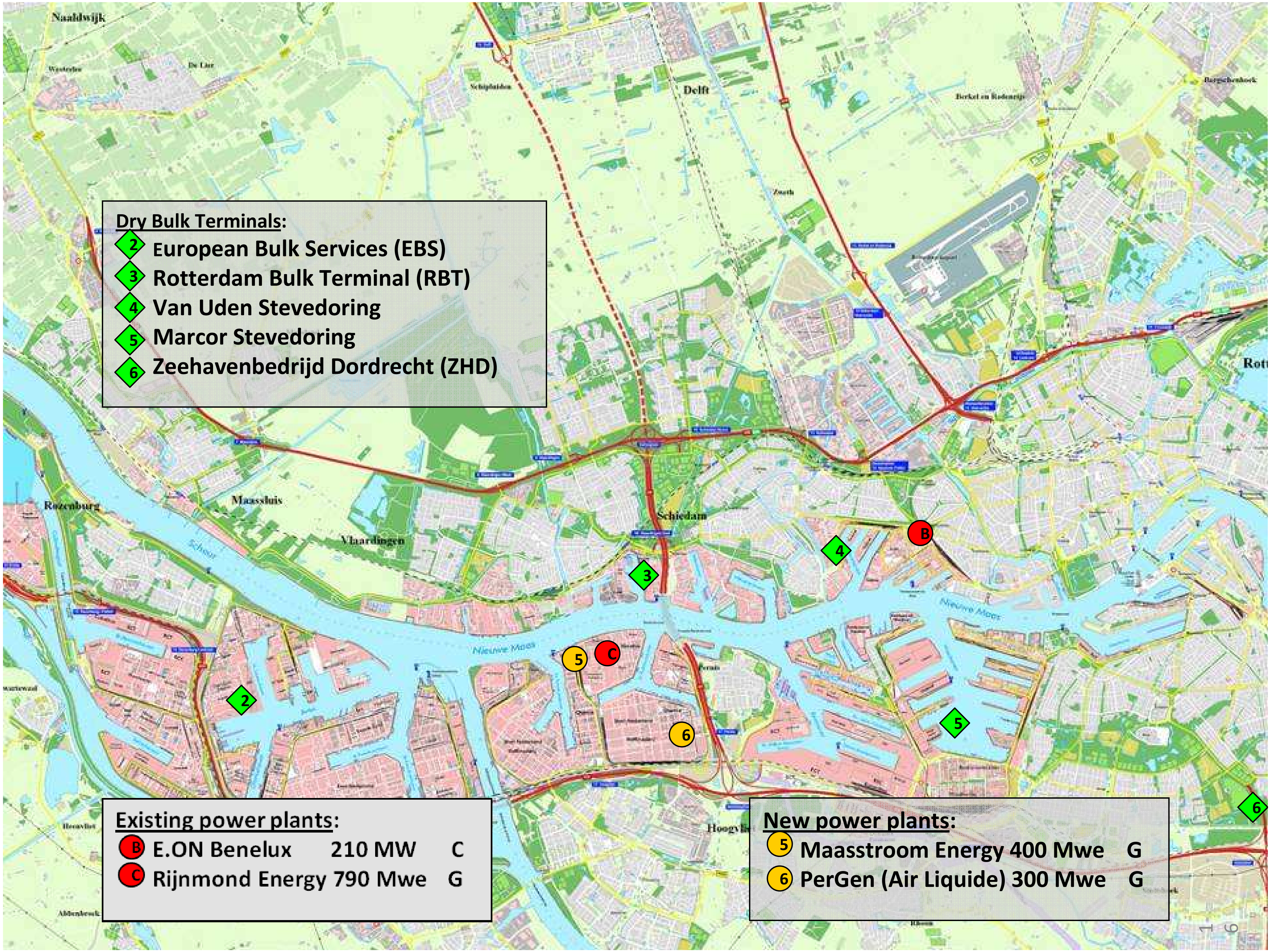
CCS

Logistics

Hinterland connections

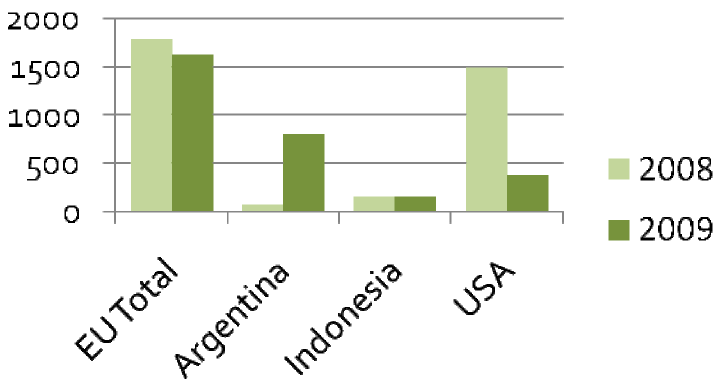
24/7 sea access


'Maasvlakte 2'
in ontwikkeling
Hoek van Holland
Oostvoorne
Brielle
Rockanje
Existing power plants:
A E.ON Benelux 1,040 Mwe C/B
New power plants:
1 E.ON Benelux 1,100 Mwe C/B
2 Electrabel 800 MW C/B
3 EnecoGen 840 Mwe G
4 C-GEN (450 MWe) C/B
(gassification)
Dry Bulk Terminals:
1 EMO
Gassification plants
(from 2015)

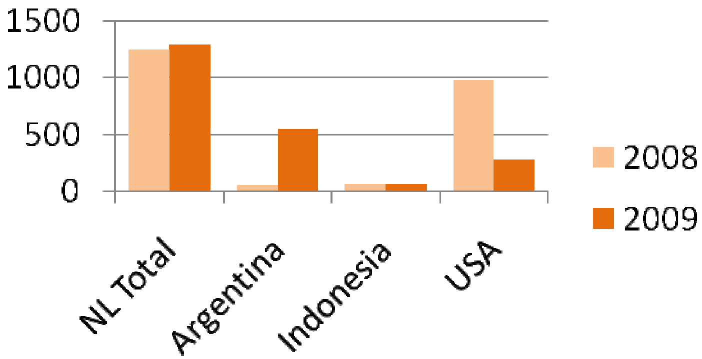

Dry Bulk Terminals:
2 European Bulk Services (EBS)
3 Rotterdam Bulk Terminal (RBT)
4 Van Uden Stevedoring
5 Marcor Stevedoring
6 Zeehavenbedrijd Dordrecht (ZHD)
Existing power plants:
B E.ON Benelux 210 MW C
C Rijnmond Energy 790 Mwe G
New power plants:
5 Maasstroom Energy 400 Mwe G
6 PerGen (Air Liquide) 300 Mwe G
Naaldwijk
Delft
Maassluis
Vlaardingen
Schiedam
Rozenburg
Nieuwe Maas
Hoogvliet

Biofuel trade

EU Biodiesel import (kton)



NL Biodiesel import (kton)

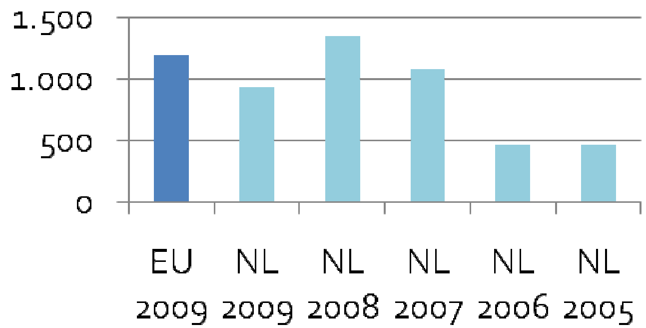


- 2009 EU biodiesel production > 8 Mtons
- EU biodiesel capacity ~ 20 Mtons
- Rotterdam production capacity is 850 kton
- Neste Maasvlakte 800 kton (2011)
- Trade is mostly extra-EU

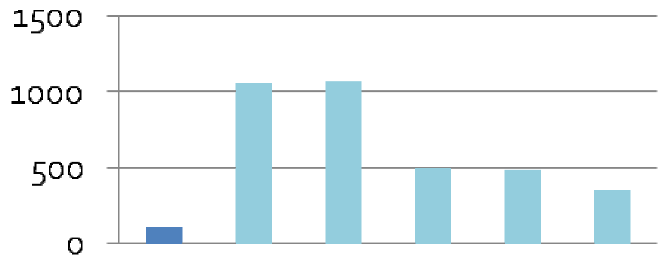
FO Licht
Commosupply

Biofuel trade

Alcohol import (million l)



Alcohol export (million l)



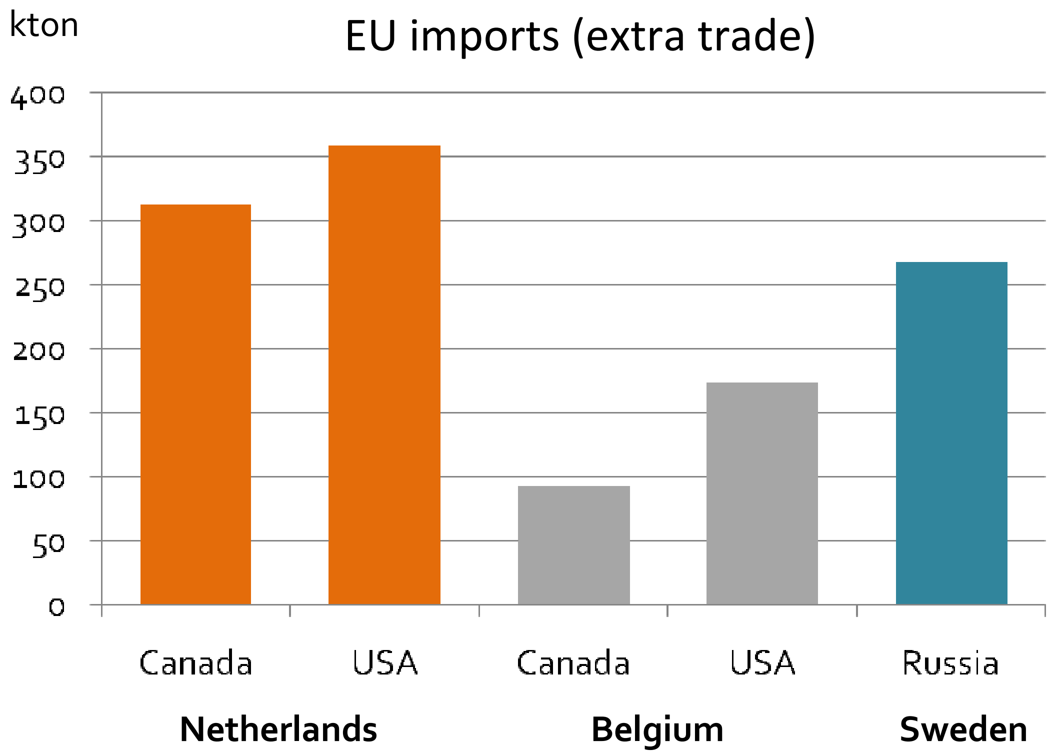
(2009: jan-nov)

- Total EU ethanol demand to grow from 7.8 (2009) to 10.0 bn liters (2010)
- Non-fuel demand 3.4 bn liters
- 1.6 bn liters of new capacity commissioned in 2010
- Abengoa – Europoort: 0.48 bn l
- Grain most relevant feedstock
- Trade is intra-EU and ACP-countries

FO Licht
LMC

Rotterdam wood pellet imports

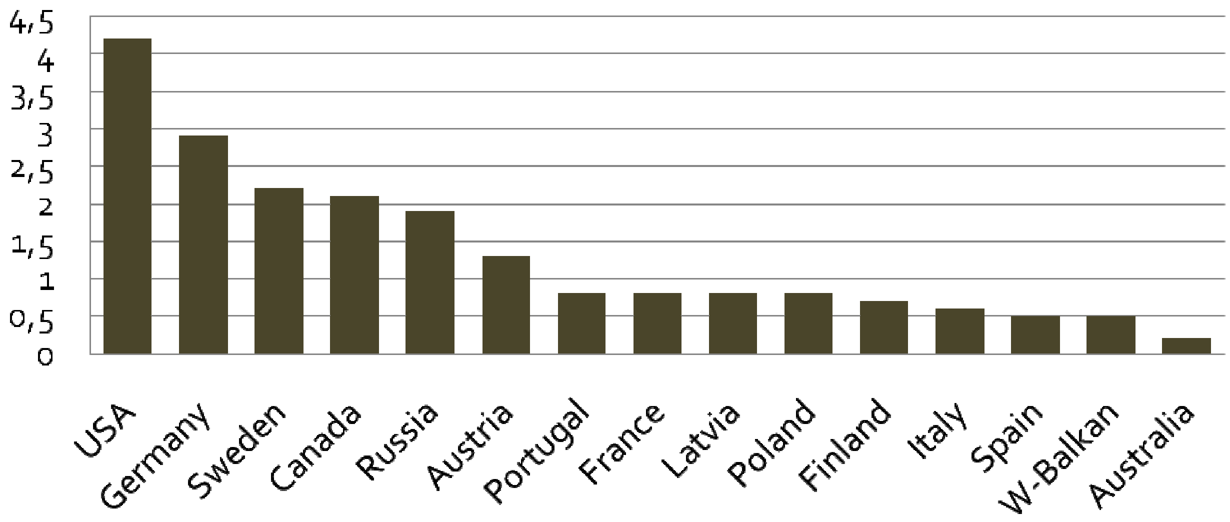
- 0,9 Mton (2008)
  - 876 kton co-firing
  - 5 end users



Pellet@tlas. 2009

Wood pellet supply

- 2009 pellet production capacity



- Estimated production ~ 20 Mtons
- EU accounts for ~ 8 Mtons
- International trade ~ 4 Mtons

Bioenergy International. 2009

Biomass is a true commodity

- Strong growth in biomass traded volumes
- Challenges:
  - Financing (upstream)
  - Trade specifics (contracts)
  - Logistics (transport, storage)
  - Product standardization

Rotterdam Biomass Programme

- **Promoting biomass to generate renewable energy**
  - Co-firing in local coalfired powerstations
  - Biomass-fueled power stations
  - Enhancing the physical infrastructure
- **Promoting biomass trade in/via Rotterdam**
  - Rotterdam Biomass Commodity Network (RBCN)
  - Biomass commodities exhange
- **Supporting industrial bio-based production**
- **Supporting development and use of sustainable biomass criteria**

RBCN

- Rotterdam Biomass Commodities Network

www.rbcn.nl

Biomass Commodities Exchange

- **Trading market with physical delivery**
  - Wood pellet contracts
  - Clearing house

- Facilitate risk management strategies and hedging instruments

- Improve price transparency

- Increase the biomass volume of both physical and trading streams

Sustainability

EU Renewable Energy Directive

- **Mandatory sustainability regime for biofuels and bioliquids:**

» Land with high biodiverse value

- Highly biodiverse grasslands to be defined

» Land with high carbon stock

- Carbon stock guideline coming in March

» Minimum GHG savings

» 'Cross-compliance' rules in the EU's common agricultural policy to apply

» Chain of Custody: Mass Balance

» Reporting requirement for companies: proposal this month

European Commission, 2010

- **No binding EU scheme for solid biomass:**

» National schemes can be developed but with internal market in mind

» Commission recommendations for criteria: similar to biofuels/bioliquids

» Member States to monitor and report on origin of biomass through data gathering/ surveys etc.

» Tender to study developments of national schemes and impacts on internal market

» Commission will review in 2011 whether further measures are needed to ensure sustainability

European Commission, 2010

National implementation

- **Biofuels and bioliquids**
  - » Member States to set up rules on how companies can comply
  - » Obligation to transpose EU Directive by 5th December 2010 in national legislation
  - » National legislation may not apply additional criteria
  - » Recognition of voluntary schemes requires approval of Commission and all Member States
- **Solid Biomass**
  - » SDE-2010 subsidy scheme does not include large scale co-firing

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