

Green Gas and the EU ETS

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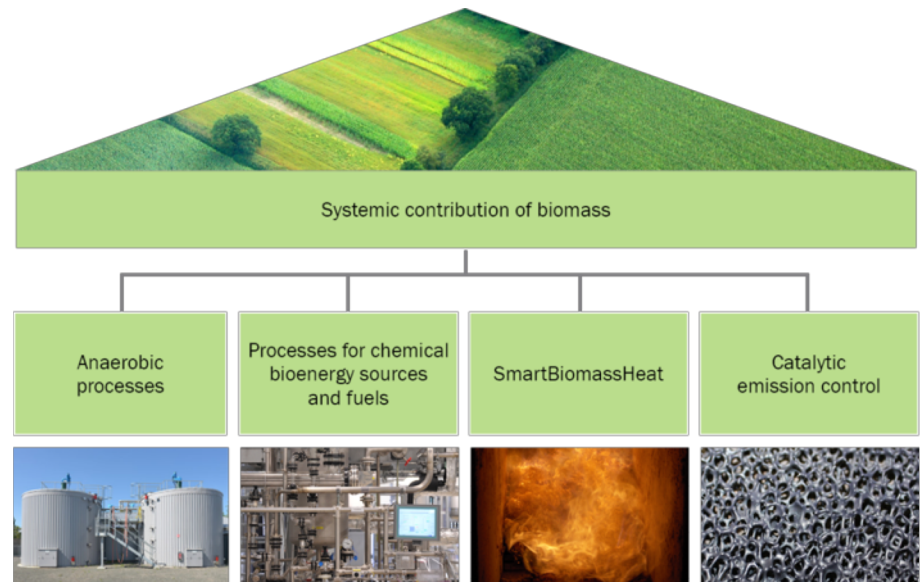
4th European Biomethane Conference - Afternoon Session I: Ireland
20th September 2018

Introduction

The DBFZ in a nutshell



- Non-profit research institute, founded by the federal ministry of food and agriculture
- Focus on biomass conversion technologies, applied R&D
- Decision support and strategy development for policy, industry, etc.
- 200 employees, approx. 45 % third-party funding

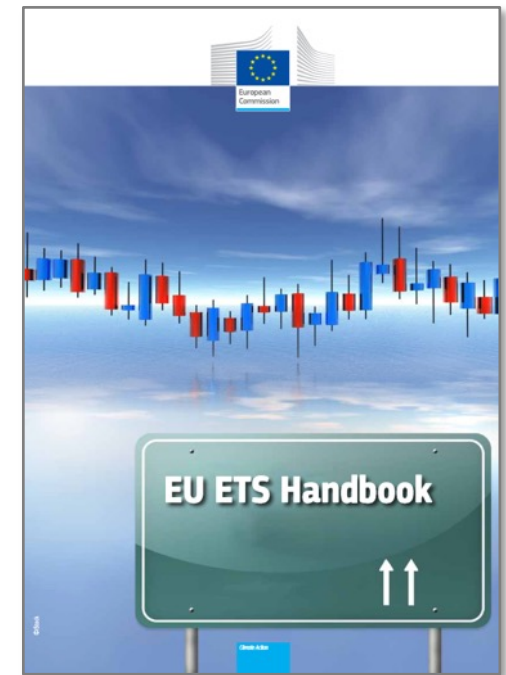


- 1. What is the EU ETS?**
- 2. How can green gases benefit from the EU ETS?**
- 3. Can the EU ETS support the market rollout of green gas technologies?**

1. What is the EU ETS?

What is the EU ETS? (I/III)

- 'Cap and trade' system - cap is set on the total amount of certain greenhouse gases that can be emitted by installations covered by the system
- Cap is reduced over time, leading to lower emission levels
- System allows trading of emission allowances
- Companies can buy limited amounts of international credits from emission-saving projects around the world
 - Two mechanisms:
 - Clean Development Mechanism
 - Joint Implementation Mechanism

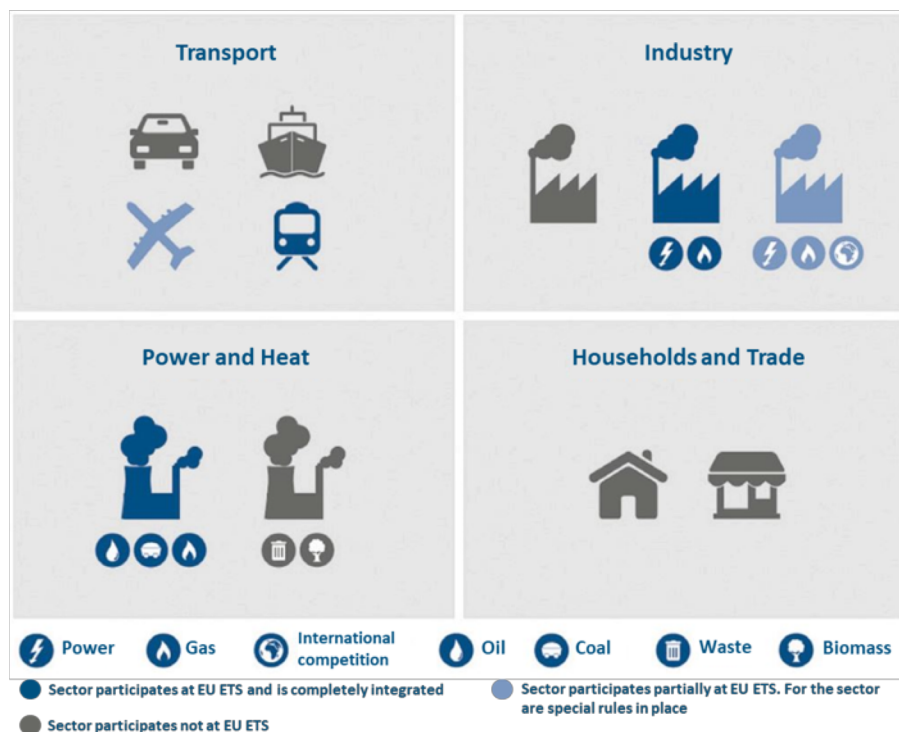


EU ETS Handbook:
https://ec.europa.eu/clima/sites/clima/files/docs/ets_handbook_en.pdf

What is the EU ETS? (II/III)

- The ETS covers the following sectors and gases:
 - **carbon dioxide (CO₂)** from
 - power and heat generation
 - energy-intensive industry sectors
 - commercial aviation
 - **nitrous oxide (N₂O)** from production of nitric, adipic and glyoxylic acids and glyoxal
 - **perfluorocarbons (PFCs)** from aluminium production

Industry sectors covered in the EU ETS



Source: ENERGIEWIRTSCHAFTLICHE TAGESFRAGEN 65. Jg. (2015)
Heft 6

What is the EU ETS? (III/III)



Price development of EU ETS allowances



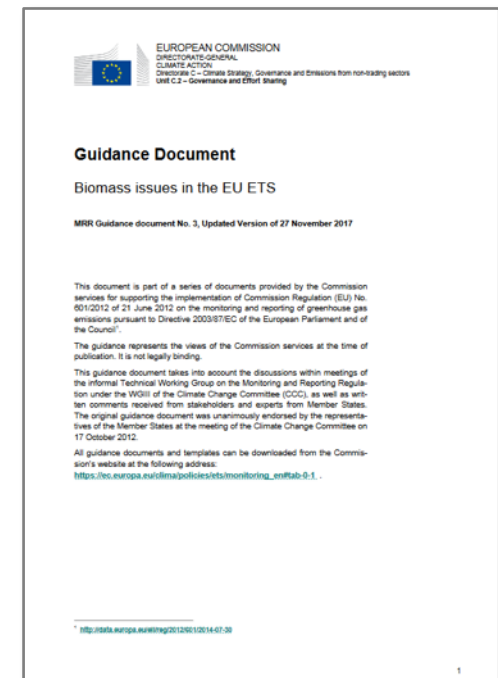
<https://markets.businessinsider.com/commodities/co2-emissionsrechte/euro>

2. How can green gases benefit from the EU ETS?

How can green gases benefit from the EU ETS? DBFZ

EU ETS and green gases

- The use of green gases in installations under the ETS can help to reduce the use of allowances
- From the perspective of the market actor, biomethane is one option to reduce emissions
- The GHG mitigation costs are basis to find the most profitable option
- Source streams of solid biomass and biogas (if not mixed with fossil materials) can always be assumed to have an emission factor of zero (preliminary conditions do exist)

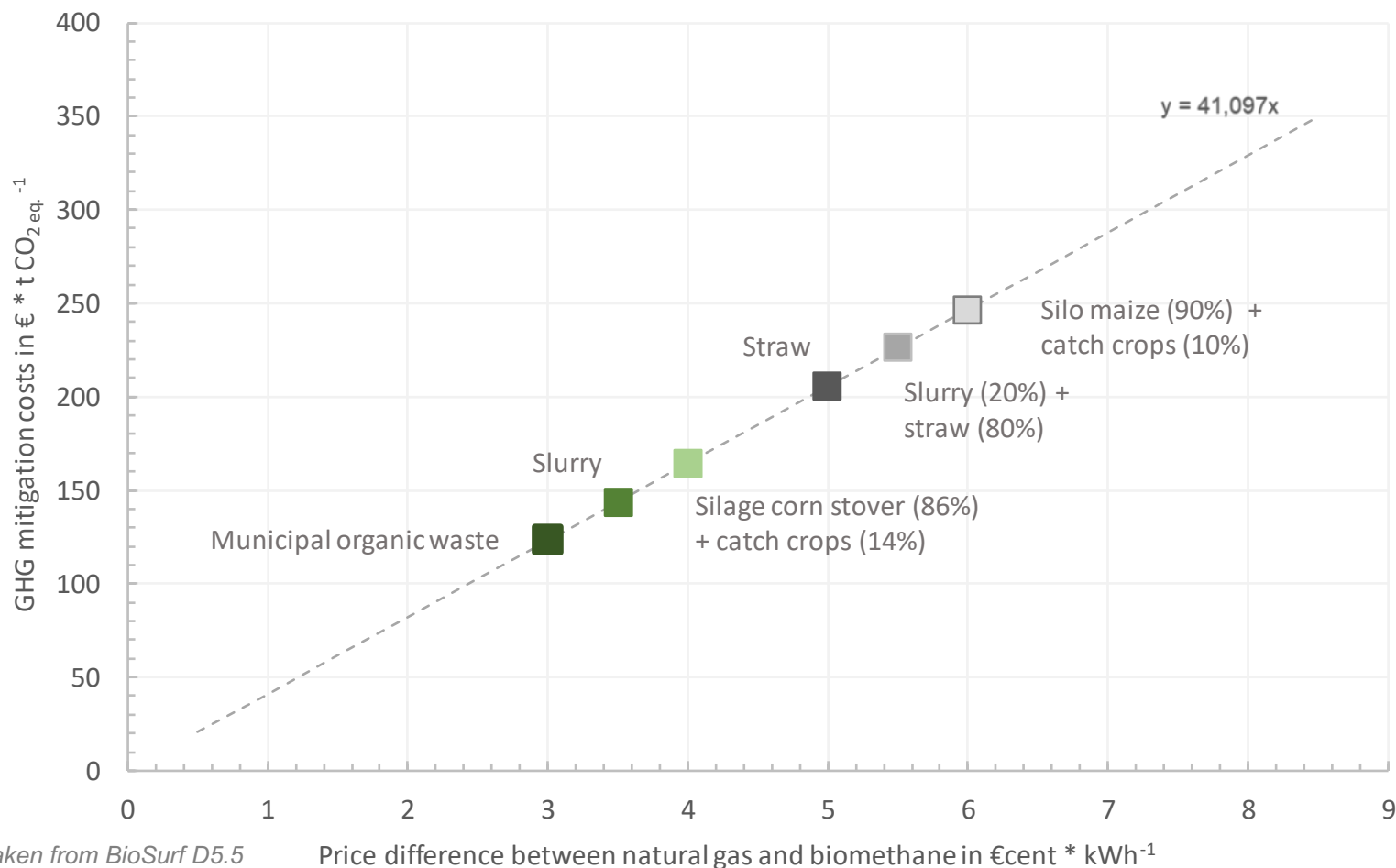


https://ec.europa.eu/clima/sites/clima/files/ets/monitoring/docs/gd3_biomass_issues_en.pdf

How can green gases benefit from the EU ETS? DBFZ

EU ETS (Bioenergy is considered carbon neutral)

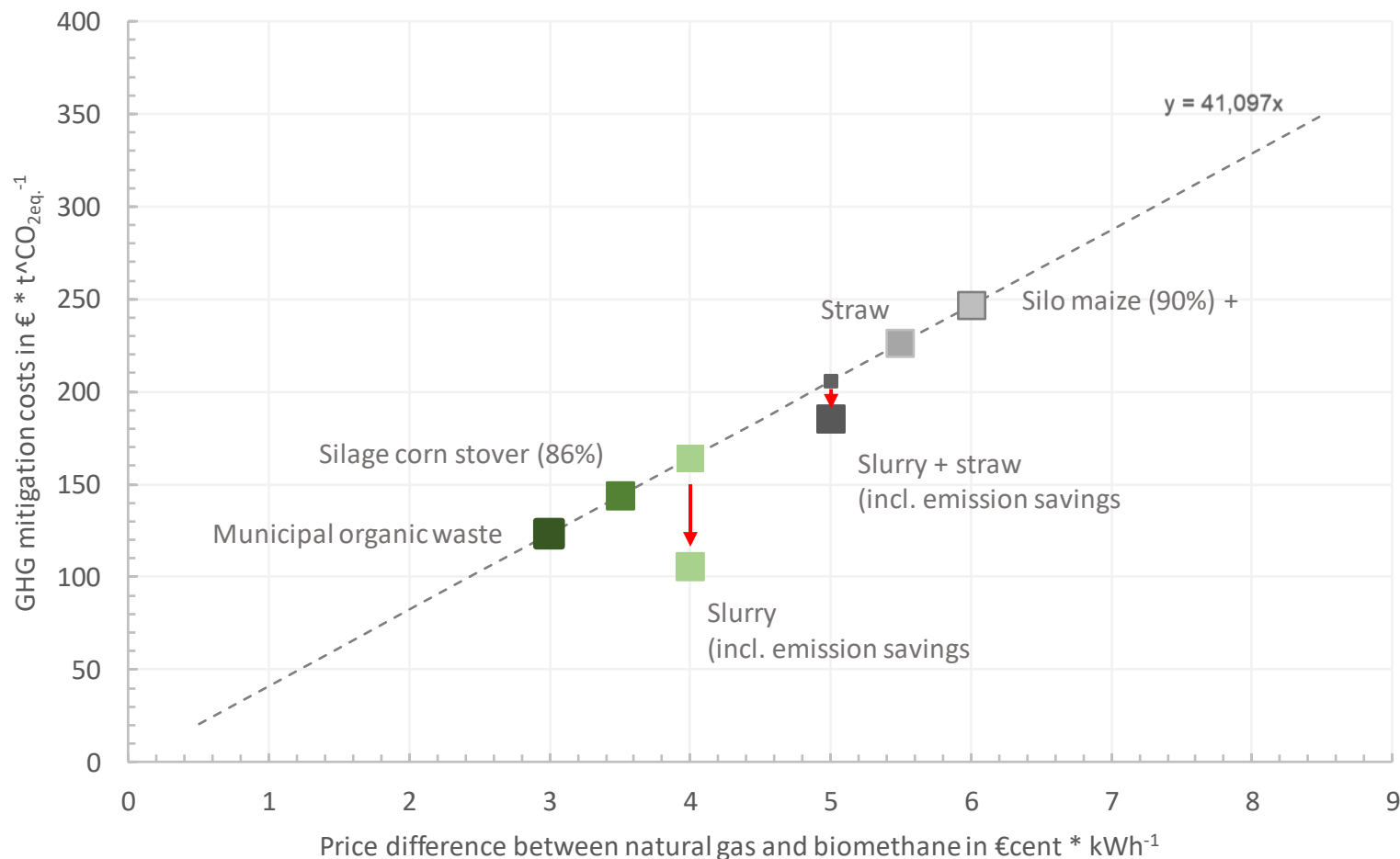
Relation between price difference and CO₂-mitigation costs



How can green gases benefit from the EU ETS? DBFZ

EU ETS (incl. avoided emissions from agriculture)

Relation between price difference and CO₂-mitigation costs



Taken from BioSurf D5.5

Footer

3. Can the EU ETS support the market rollout of green gas technologies?

Can the EU ETS support the market rollout of green gas technologies?



- The EU ETS is not the silver bullet to support the market development or rollout of one specific technology
 - It is a technology neutral instrument to reduce emissions in specific industry sectors
 - Options (technologies, allowances, CDM measurements, etc.) with the lowest GHG mitigation costs are usually preferable
- The EU ETS might contribute to the support of a green gas industry in Ireland, but it has to be considered as one element in a framework of support mechanisms

Smart Bioenergy – Innovations for a sustainable future

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