

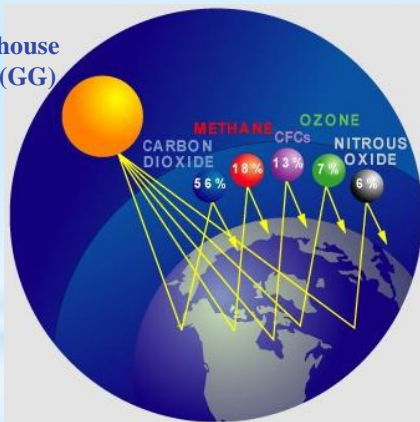
GLOBAL WARMING

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2019

GREENHOUSE EFFECT



Greenhouse Gases (GG)



* Netherlands is very vulnerable for climate change

INTERNATIONAL BACKGROUND

- **CONVENTION ON CLIMATE CHANGE** (Rio de Janeiro 1992)
- **Kyoto Protokol 1997** - 5% reductions (2005 - 2012)
- European - wide GG emission reduction target: 8% during the period 2008 - 2012 comparing to 1990 levels
- (burden sharing for EU MS)

INTERNATIONAL BACKGROUND

Doha Amendment 2012

- new obligations for MS in Annex I for the 2nd period (2013-2020)
 - 18% reductions
- revision of the list of GG

COP 21- Paris 2015

- new global **Climate Change Convention**
- new obligations for the period 2020
- voluntary national reductions – EU 43% → 2030

Implementing the Kyoto Protocol in the EU

GG reduction target:

- Emission trading (ET)
- Joint implementation of obligation to reduce GG emissions (JI)
- Clean Development Mechanisms (CDM)

EU LEGISLATION ON CLIMATE CHANGE

1. Legislation on emission reductions
2. Legislation on energy efficiency
3. Legislation on renewable sources of energy

Energy and climate package:

- 20% GG abatement target
 - 20% renewable energy target
 - 20% energy efficiency target
- by 2020

20% GG emission reductions target

The Climate and Energy package sets for the Union a 20 % GHG emission reduction target by 2020 compared to 1990. This effort has been divided between the sectors covered by:

- a) Emission Trading System ('ETS')
 - b) non-ETS sectors under the Effort Sharing Decision (ESD 2006/944).
- ETS provides an EU-wide cap
 - ESD sets annual emission allocations in the non-ETS sector for each Member State.

The emissions trading system (EU ETS) (2013-2020)

„Cap and Trade“ principle → a cap is set on the total amount of certain GG that can be emitted by installations covered by the EU ETS system: CO₂, N₂O, PFCs

- A single, EU-wide cap on emissions (absolute quantity of GG which may be emitted in the EU) applies in place of the previous system of national caps
- The cap is reduced over time, total emissions will fall
- In 2020, emissions from sectors covered by the system will be 21% lower than in 2005.
- In 2030, under the Paris commitment, they would be at least 40% lower.

EU ETS (2013-2020)

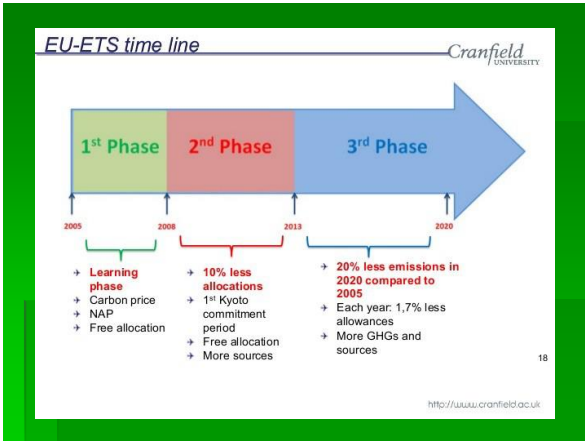
- **Emission allowance** = the right to emit one tonne of carbon dioxide (CO₂) or the equivalent amount of two more powerful greenhouse gases, nitrous oxide (N₂O) and perfluorocarbons (PFCs)
- **Emission allowances** - free allocation
- auctioning
- Companies can trade these allowances with one another as they need.

EU ETS (2013-2020)

International credits are financial instruments that represent a tonne of CO₂ removed or reduced from the atmosphere as a result of an emissions reduction project. They are generated through:

- Joint Implementation → ERUs
- Clean Development Mechanism → CERs

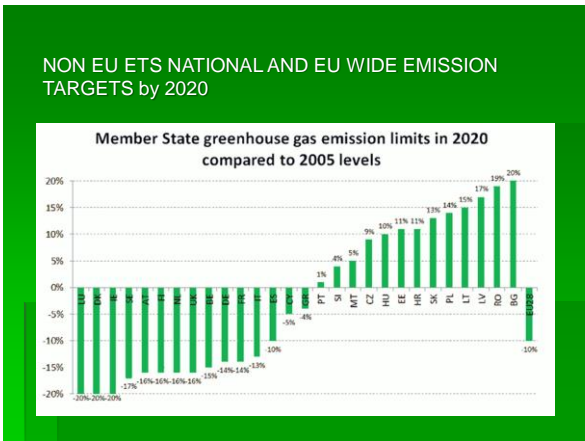
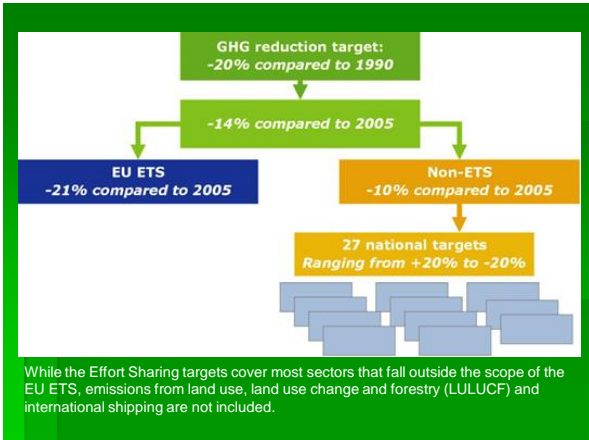
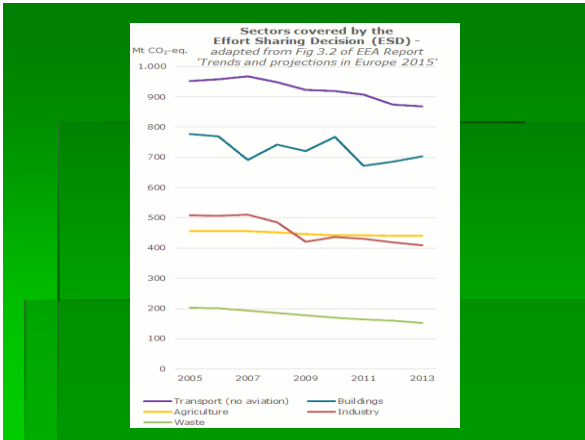
Exchange of credits for EU allowances



NON EU ETS sectors

Effort Sharing Decision

- for most sectors not included in the EU ETS, such as transport, buildings, agriculture and waste.
- establishes binding annual greenhouse gas emission targets for Member States for the period 2013–2020
- reduction by non-ETS sectors of -10% compared to 2005 that is then shared out between EU Member States



Monitoring, reporting and verification mechanisms

- monitoring anthropogenic GG emissions
- evaluating the progress made by MS and the EU
- setting up the national and European registries and programs
- ensuring timely, transparent and correct reporting
- data submitted in the emissions report must be verified

2020 target

The EU is on track to meet the 20% target for 2020:

- EU emissions were reduced by 23% between 1990 and 2016, while the economy grew by 53% over the same period.
- EU emissions decreased by 0.7% in 2016, while GDP grew by 1.9%.

(https://ec.europa.eu/clima/policies/ets_en)

Key EU targets for 2030

- At least 40% cut in greenhouse gas emissions compared with 1990
- At least 32% of total energy consumption from renewable energy
- At least 32.5% increase in energy efficiency

https://ec.europa.eu/clima/citizens/eu_en

Long-term goal

https://ec.europa.eu/clima/citizens/eu_en

- By 2050, the EU aims to cut its emissions substantially – by 80-95% compared to 1990 levels as part of the efforts required by developed countries as a group.
- Turning Europe into a highly energy efficient and low-carbon economy will also boost the economy, create jobs and strengthen Europe's competitiveness.

The EU ETS legislation

- **Directive 2003/87/EC** establishing a scheme for greenhouse gas emission allowance trading within the Community as amended
- Commission **Regulation (EU) No 1031/2010** on the timing, administration and other aspects of **auctioning** of greenhouse gas emission allowances pursuant to Directive 2003/87/EC

EU ETS Implementing legislation

- Regulation (EU) No 389/2013 establishing a **Union Registry** pursuant to Directive 2003/87/EC
- Regulation (EU) No 601/2012 on the **monitoring and reporting of GG emissions** pursuant to Directive 2003/87/EC
- Regulation (EU) No 600/2012 of 21 June 2012 on the **verification** of GG emission reports and tonne-kilometre reports and the accreditation of verifiers pursuant to Directive 2003/87

Energy and climate package - renewables

- 20% renewable energy target to be attained in 2020
- **Directive 2009/28/EC on the promotion of the use of energy from renewable sources**



- target to be reached by 2020 for the EU is a share of 20% energy from renewable sources in gross final consumption of energy.
- each MS has its own 2020 binding target
- **Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources** (target 32% of energy from RS
- **Date of transposition: 30/06/2021**

Energy and climate package - energy efficiency

Directive 2012/27/EU on energy efficiency as amended

- To enhance cost-effective improvements in energy efficiency. (32% target by 2030)
- Applies to companies involved in the distribution and sale of energy and final consumers of energy. It does not apply to companies subject to the EU ETS (ET Directive)

Energy and climate package - energy efficiency

Directive 2010/31/EU on the energy performance of buildings → 2018/44

- Calculation of energy efficiency
- Minimum energy efficiency requirements
- Energy performance certificate

Energy and climate package - carbon storage

Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide

- 3 phases – capture, transportation, permanent storage

Legislation on other activities

Directive 2009/30/EC (amending Directive 98/70/EC) as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions (as amended)

- Rules on the specification various fuels have to meet so that they can be marketed throughout the EU

Legislation on other activities

Regulation (EU) No 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases (F- gases)

- Rules on use, containment, recovery and destruction of F- gases

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