



The impact of the oil sector on environment and climate

Peter VAJDA, Environmental Expert,
Energy Community Secretariat

Agenda



- 1. The oil sector and its interaction with environmental media***
- 2. How to deal with impacts? Environmental law and its relation to the energy sector***
- 3. An example of command and control measures***
- 4. Market-based instruments***
- 5. Activities of the Energy Community in the field of environment and climate***

Agenda



- 1. *The oil sector and its interaction with environmental media***
- 2. How to deal with impacts? Environmental law and its relation to the energy sector*
- 3. An example of command and control measures*
- 4. Market-based instruments*
- 5. Activities of the Energy Community in the field of environment and climate*

Issues – in general

WATER



AIR



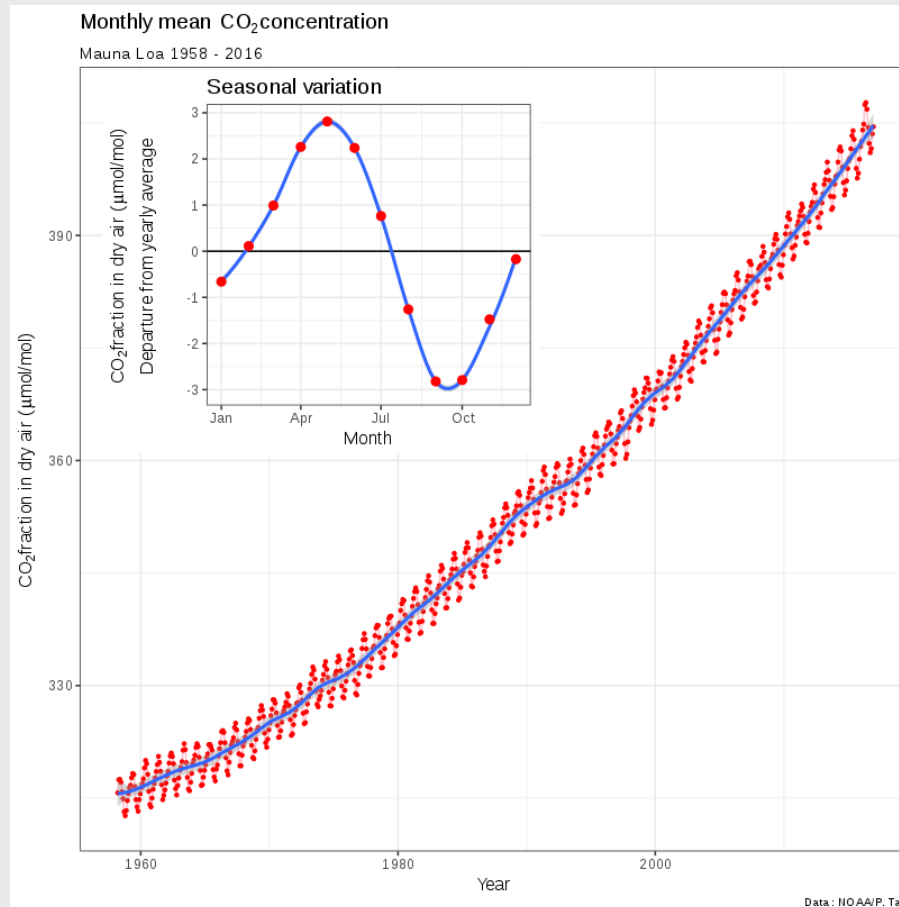
SOIL

Environmental impacts and the oil sector



- *Emission related to the generation transmission use of energy (upstream / downstream)*
- *Emissions into air water soil (waste)*
- *Climate change (greenhouse gas emissions)*

Increase in greenhouse gas concentration



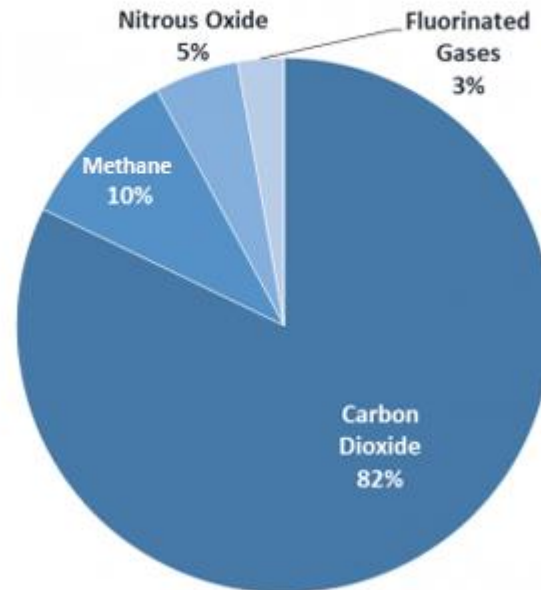
Source: NOAA

Greenhouse gases

Gas	Tropospheric concentration (1000-1750)	Trophospheric concentration (recent)	Atmospheric lifetime (years)	100 year global warming potential (GWP)
Carbon-dioxide	280 ppm	400 ppm	50-200	1
Methane	0.7 ppm	1. 875 ppm	12	25
Nitrous oxide	0.270 ppm	0.321 ppm	114	296
Perflouro-methane	40 ppt	80 ppt	>50 000	5700
Sulfur-hexafluoride	0	4.2 ppt	3200	24 000

Source: IPCC

U.S. Greenhouse Gas Emissions in 2015



U.S. Environmental Protection Agency (2017). *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015*.

Agenda



1. *The energy sector and its interaction with environmental media*
2. **How to deal with impacts? Environmental law and its relation to the energy sector**
3. *An example of command and control measures*
4. *Market-based instruments*
5. *Activities of the Energy Community in the field of environment and climate*

Ex ante and ex post approaches



- *Ex ante: environmental impact assessment / strategic environmental assessment*
- *Ex post: measures for the limitation of emissions (mitigation) or to cope with the results (adaptation)*
- *Mitigation measures: can be regulatory (“command and control”) or market-based*
- *Adaptation: e.g. flood protection, agriculture, specific issues in mountain areas*

Environmental impact assessment



- ***“public and private projects which are likely to have significant effects on the environment”***
- ***For some projects (Annex I) → mandatory EIA (size, nature of the project)***
- ***For some projects (Annex II) → screening***
- ***Number of projects related to oil sector***
- ***EnC → projects related to Network Energy***
- ***EIA is a process to identify the potential effects of the project on the environment***
- ***Measures to ensure early and effective opportunities for public participation***

Strategic environmental assessment



- *To provide for a high level of protection of the environment*
- *To contribute to the integration of environmental considerations into the preparation of public plans and programmes with a view to promoting sustainable development*
- *Plans, programmes and projects which are likely to have significant effects on the environment are subject to an assessment*
- *Broad number of sectors*

Agenda



1. *The energy sector and its interaction with environmental media*
2. *How to deal with impacts? Environmental law and its relation to the energy sector*
3. **An example of command and control measures**
4. *Market-based instruments*
5. *Activities of the Energy Community in the field of environment and climate*

The Industrial Emissions Directive



- *Adopted in 2010, framework directive*
- *Concept of “best available techniques”*
- *Chapter II – refineries*
- *Chapter III – minimum requirements for combustion plants*
- *Setting emission limit values for SO₂, NO_x and dust (particulate matter) for plants with a rated thermal input (RTI) \geq 50 MW*
- *ELVs may vary based on the RTI of the plant and on the type of fuel used (solid, liquid, gaseous)*

BAT information exchange

“Seville Process”

IPPC Bureau

MS
experts

Installation level
data (techniques,
emissions, etc.)

Industry
experts

NGO
experts



BREF
with BAT conclusions

Agenda



1. *The energy sector and its interaction with environmental media*
2. *How to deal with impacts? Environmental law and its relation to the energy sector*
3. *An example of command and control measures*
4. **Market-based instruments**
5. *Activities of the Energy Community in the field of environment and climate*



- ***“A cornerstone of the EU's policy to combat climate change and its key tool for reducing industrial greenhouse gas emissions cost-effectively” (COM)***
- ***Cap and trade system***
- ***From Phase I to Phase IV***
- ***Pro: Phase I of the EU ETS (2005–2007) was a "learning phase" designed primarily to establish baselines and create the infrastructure for a carbon market, not to achieve significant reductions, Phase II worked much better, mandatory auctioning will do the trick***
- ***Con: over-allocation, windfall profits, price volatility, failure to meet its goals***

The carbon price



Agenda



1. *The energy sector and its interaction with environmental media*
2. *How to deal with impacts? Environmental law and its relation to the energy sector*
3. *An example of command and control measures*
4. *Market-based instruments*
5. **Activities of the Energy Community in the field of environment and climate**

The environmental dimension



Title II: “Acquis of the Energy Community” → NETWORK ENERGY
geographical scope: Contracting Parties

Environment

- **EIA** Directive (85/337/EEC as amended by Council Directive 97/11/EC and Directive 2003/35/EC) – after entry into force
- **Sulphur in Fuels** Directive (1999/32/EC) – as of 1 January 2012
- **LCP** Directive (2001/80/EC) – as of 1 January 2018
- Art. 4(2) of the **Wild Birds** Directive (79/409/EEC) – after entry into force
- Endeavour to accede/implement: **Kyoto Protocol; IPPC Directive** (96/61/EC)
- **Chapter III and Annex V of IED** (2010/75/EU) – as of 1 January 2018 for new plants (2013 decision), as of 1 January 2028 for existing plants (2015 decision)

Future of the Energy Community



- **Treaty extended** for an additional 10 years in 2013 (2016-2026)
- In parallel, Ministerial Council mandated **High Level Reflection Group** chaired by MEP Jerzy Buzek to carry out an overall analysis on the EnCT
- **Report** published in June 2014
- Several **recommendations** regarding new acquis (remarkable environmental dimension – SEA, ELD, **FQD**, IED Ch. II and IV, AQD, **ETS**)
- **Reform of Energy Community** → process of several years, ongoing proposals in the area of environment and climate (2016: “Year of Environment”)



*Thank you for your
attention!*

www.energy-community.org

Picture credits: Energy Community photo contest; courtesy of the Contracting Parties; istockphoto.com