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Accumulation of aids to fossil fuels under CCS projects and market-based support.

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CCS legal research at the University of Oslo

- Research topics:
  - CCS in Norwegian petroleum Law and environmental law;
  - International law framework for enabling CCS;
  - Liability for leakage from CCS in Norwegian law;
  - Transboundary CCS and liability for leakage between state parties under the international climate regime;
  - CCS support and state aids regime under EEA law.

- Seminars (for 2009):
  - New developments in the regulation of CCS in the EU and Norway.
  - Third Party Access to CCS Transport and Storage facilities.

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Background for the presentation and main legal questions

- Background:
  - CCS and clean coal are **part of the climate mitigation strategy**;
  - Renewed interest in the **removal of remaining fossil fuels subsidies**;
  - Efficiency concerns around the **possible accumulation of aids to fossil fuels**;
  - **Defining situations of accumulation of aids** (in its European understanding) = the granting of more than one aid to the same project's costs or expenditure;
  - **Differentiating situations** and related financial support: demonstration, deployment and commercial phases.
  - **Focus on EU legislation** as one of the most developed and comprehensive legislations on incentives and CCS. **But reflection should be extended** to other countries depending on fossil fuels (and in particular coal) and to emerging economies (in the perspective of a international CDM market integrating CCS).

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- Main legal issues:
  - Scope of application of emissions trading and CCS support measures;
  - The persistence of subsidies to fossil fuels, and in particular coal;
  - The risk of accumulation of subsidies and its impact on a rapid transition to a low carbon economy;
  - Structure and coordination of the rules applicable to accumulation of aids under the different instruments.

- Objectives:
  - Evaluate the **possible accumulation of incentives to CCS projects** that could result in **delaying the transition to a low carbon economy further than necessary**;
  - Offer a reflection on the **structure of the regulation** (state aids and CCS related legislation) to evaluate the manner to avoid the possible accumulation of incentives and their counterproductive effects.

1. Review of fossil fuels coverage under CCS and emissions trading schemes

- CCS-projects apply to plants powered by different types of fossil fuels: **oil, natural gas and coal**.
  - This presentation focuses in particular on coal, which is typically used for electricity generation, heat generation, steel production and other industrial processes.
- **The type of support to CCS vary** according to the stage of development of the projects: **demonstration, deployment and commercialisation**. Many CCS projects in the commercial phase will be based on coal at the international level.
- **Available tools for projects financing (EU level)**:
  - Direct support by MSs;
  - Direct support by the EU: e.g., 2009 European Economic Recovery Plan, providing EUR1,200 million in favour of CCS;
  - Indirect support from MSs (like feed-in tariffs);
  - Incentives from the EU ETS;
  - Private sector.

- In particular, under **Directive 2003/87/EC** of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, as amended by Directive 2009/29/EC (EU ETS Directive):
  - Apply to emissions from the activities covered by EU ETS and listed in Annex I, which includes **combustion installation relying on fossil fuels**.
  - Amended ETS adds to Annex I **separately the different stages of the CCS chain**: capture, transport and storage of GHG.
  - **Stored CO2 counts as an emission reduction** under the EU ETS = THE incentive.
  - **Carbon leakage sectors** entitled to receive **allowances free of charge until 2020**.
  - **"NER 300"** = 300 million allowances set aside in the New Entrants' Reserve (NER) of the EU ETS and sold through auctioning for funding installations of innovative renewable energy technology and CCS. 12 CCS demonstration projects (demonstration)
  - **Auctioning revenues from EU ETS in favour of CCS**. Amended EU ETS Directive provides that at least 50% of the revenue from auctioning allowances should be used for climate measures, including CCS. (Art. 10.3 (e)).

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- **Carbon leakage** – Commission Decision of 24 December 2009 determining, pursuant to Directive 2003/87/EC, a list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage (2010/2/EU). (OJ 5.1.2010 L 1, p.10). Listed in Annex and subject to a significant risk of carbon leakage:
  - Mining and agglomeration of hard coal;
  - Extraction of crude petroleum and natural gas;
  - Manufacturing of crude oil and fats;
  - Eventually other manufacturing processes concerned.

- **NER 300 draft decision**: Draft Commission Decision on laying down criteria and measures for the financing of commercial demonstration projects that aim at the environmentally safe capture and geological storage of CO2 as well as demonstration projects of innovative renewable energy technologies under the EU ETS.
  - "*necessary to lay down both the **rules and criteria for the selection and implementation of those projects** and the **basic principles for the conversion of the allowances** and for **the management of the revenues***." (2).

2. In parallel, the persistence of subsidies and diverse incentives to fossil fuels. Focus on coal.

- <u>The data gap</u>
  - **Last data available**: European Commission *Inventory on public aid granted to different energy* sources(2002); European Environment Agency *Energy subsidies in the EU,* 2004 (2001 data); Commission Communication COM (*2007*) 253 on the Application of Council Regulation (EC) No 1407/2002 on State Aid to the Coal Industry. **More recently**: European Commission 2009 Autumn Update of the State Aid Scoreboard (SEC(2009) 1638; Ecorys Study for the European Commission, *An Evaluation of the needs for state aid to the coal industry post-2010,* 2009. **No general reporting obligation** like in some Member States (Germany, annual reporting).
  - **Recent international initiatives**: the Global Subsidies Initiatives, IEA database.

- <u>Types of fossil fuels subsidies</u>
  - **Consumption support** (stimulate demand, discourage energy savings and increase supply: tax measures like reduced VAT rate for household consumption (see Directive on energy products taxation); reduced exercise duty; aid to electricity generated from fossil fuels)
  - **Production support** (e.g. to extraction; financing of mandatory storage of oil products)
  - **Other grounds**: R&D (since 6FRP redirected to CCS), social cohesion, subsidies through regulation, etc.

- Overview of support to coal sector in EU Member States:

  - **Not all EU Member States produce coal, not all coal-producing countries subsidize their production**, and **not all coal-producing countries want to continue national production**
    - E.g, state aid to the coal sector in Slovenia and Bulgaria only goes to closed mines and therefore no subsidized coal used.
    - Hungary plans to end all operating aid in 2014 and Germany intends to do so in 2018.
    - General consensus to **reduce and even phase out coal**.
  - However, **significant amounts of aids remain** and **coal cannot be totally remove from the energy-mix**. Former producing countries replaced their national production by imports (e.g., France).
  - For most coal-subsidizing Member States (except for Poland), **subsidized coal is almost exclusively used for electricity generation**. This is why there is also here a risk of overlap with aid to CCS projects.

- Applicable legislation regarding the control of aids granted to the coal sector:

  - Regulation (EC) No 1407/2002 on state aid to the coal industry:
  - Aid for accessing coal reserves
  - Aid for reducing mining activities;
  - Aid to recover exceptional costs.
  - The aftermath of its expiry on 31 December 2010.

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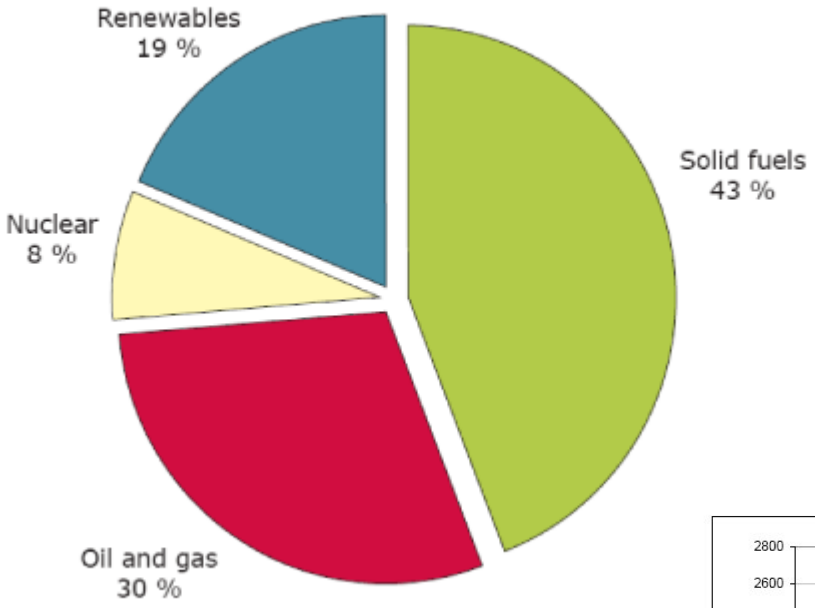
- Alternative solutions to continue support:
  - General framework on EU state aid rules;
  - Among others: public service obligation, regional aid, training aids, rescuing & restructuring aid, de minimis rules threshold, SME investment and employment aid.

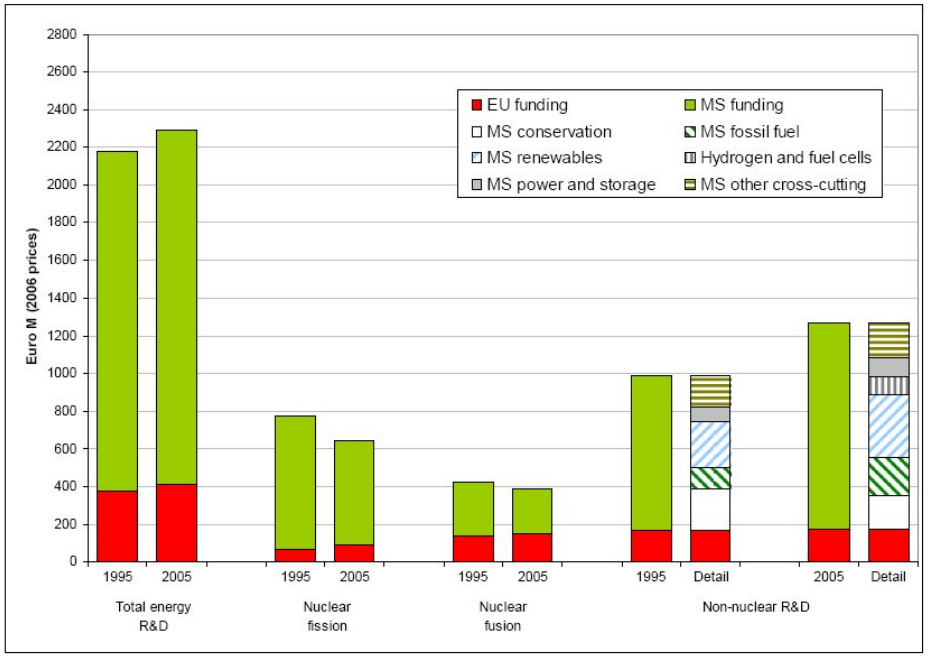
- The future of coal production within the European energy mix and the role of CCS: towards a European clean coal roadmap?
  - **Likely to remain uncompetitive post-2010** in various Member States. Only Poland expects its coal mines to remain competitive after 2010.
  - **Some protective measures for security of supply issues**. Ex: Directive 2009/72/EC, Article 15.4 enables MSs to give priority up to 15% to electricity generated by power plants using indigenous primary energy fuel sources. Grounds: security of energy supply.



Energy Subsidies in the European Union: A Brief Overview, European

Environment Agency, 2004

Total energy Research and Development expenditu
EU-15 Member States and EU level funding (2006
data):



Member State	Electricity generation	Steel and other industry	Heat generation
Germany	9%	22%	-
Hungary	3.6%	-	-
Romania	7%	-	NA
Slovakia	13.6%	-	-
Poland	42.5%	>90%	-

Use of Subsidized Coal in relevant Member States (as % of Total).
Table 3.5, Ecorys report 2009, p.35.

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- Overview at international level

  – **United States**: Environmental Law Institute revealed that fossil fuels and energy subsidies for Fiscal Years 2002-2008 (federal support) are much more higher than those for RES. ($72 billion for fossil fuels over the 7-year period; $29 billion for RES.) Ex: tax exemptions for a great part.

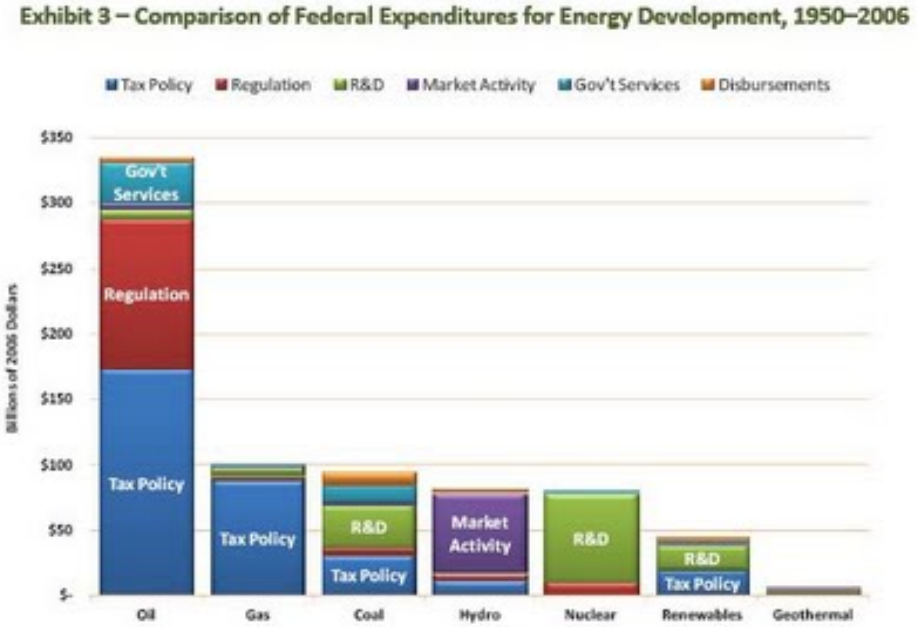
  – World Bank estimates: **in the 20 highest-subsidizing non-OECD countries**, subsidies to petroleum products add up to some $150 billion annually; energy subsidies to around $310 billion a year – representing about 0.7% of world GDP in 2007. Main part: subsidies used to lower the prices of fossil fuels. (WBR 2010)

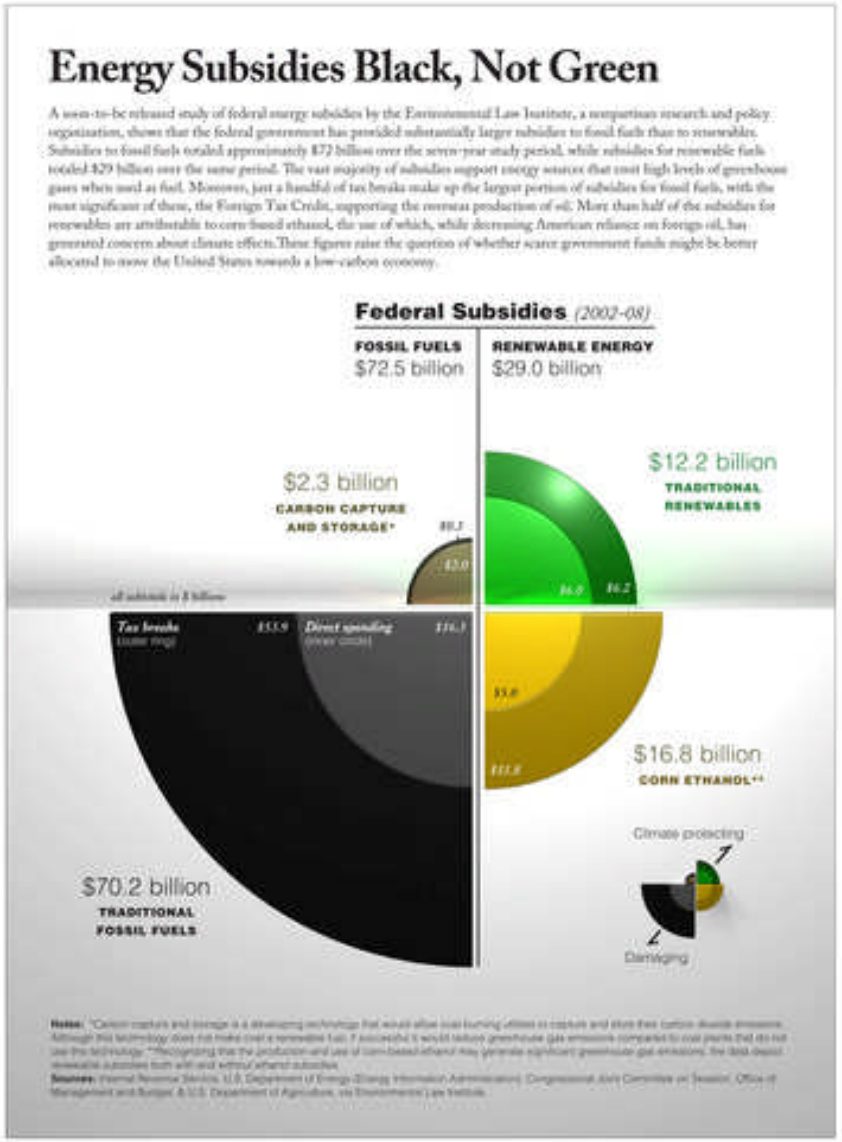
  – Most recently: **G-20 Call**, Pittsburgh Summit, 25 September 2009. G20 countries and the EU agreed:

"24. To phase out and rationalize over the medium term inefficient fossil fuel subsidies while providing targeted support for the poorest. Inefficient fossil fuel subsidies encourage wasteful consumption, reduce our energy security, impede investment in clean energy sources and undermine efforts to deal with the threat of climate change.

25. We call on our Energy and Finance Ministers to report to us their implementation strategies and timeline for acting to meet this critical commitment at our next meeting."

Case of the United States





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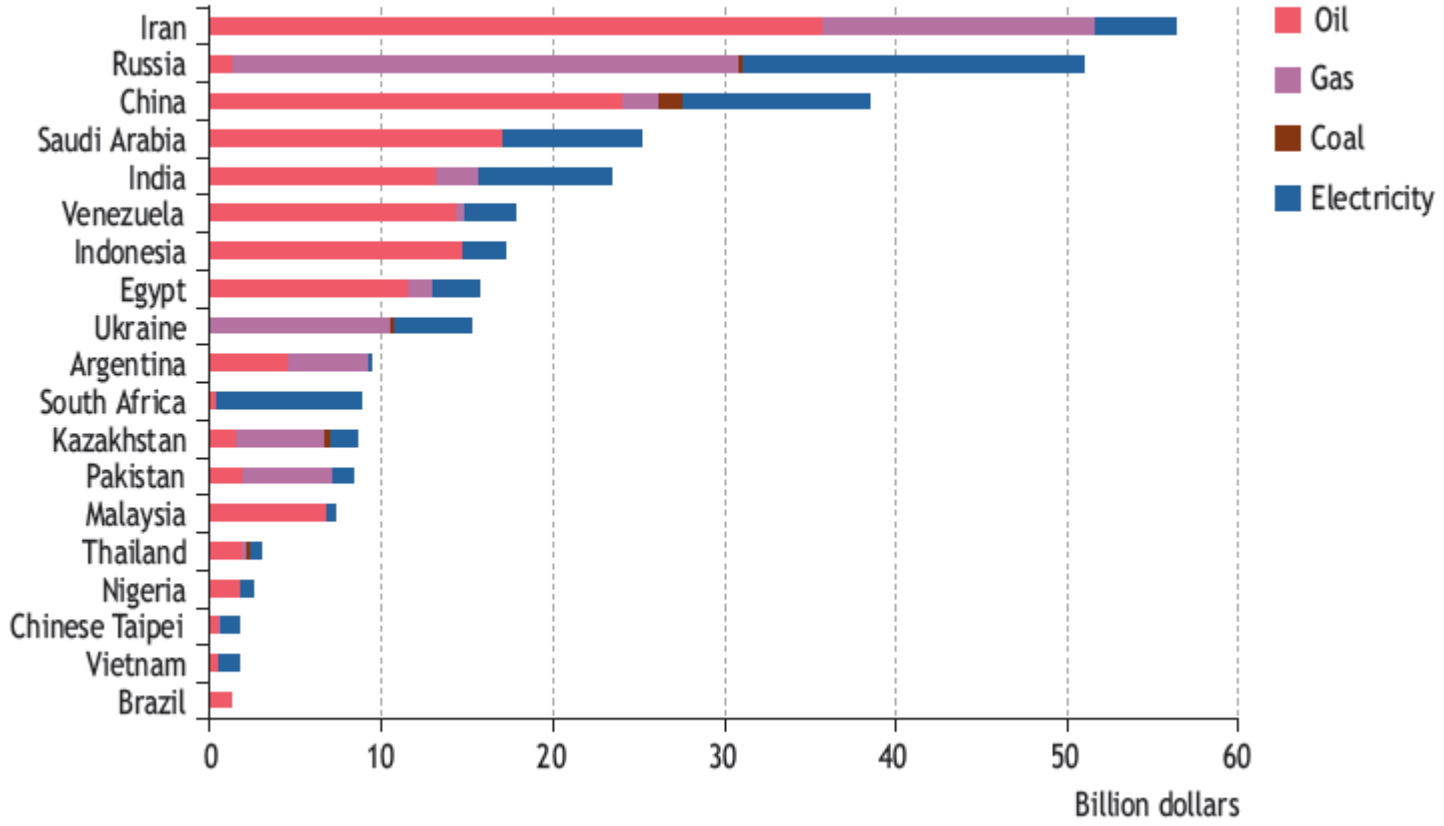
Case of non-OECD countries

Figure 1.1 • Energy subsidies by fuel in non-OECD countries, 2007



Source: IEA analysis.

3. Applicable rules to deal with accumulation of subsidies under CCS projects: reflection on the structure of the rules.

- Defining **subsidies**

- **EU state aid rules** will be determinant to avoid accumulation of aids:

  – Common principles regarding the accumulation of aids received by project and subject to **assessment** by national competition authorities and European Commission; **Principle of aid digression or reduction**.
    - *Commission Communication on the cumulation of aids for different purposes* (OJ 5.1.1985, C3, p.3) Defined a procedure of notification of significant cases of accumulation of aids to the European Commission.
    - Subject to aid ceiling rules and *de minimis* rules.
  – **Other aspects** of accumulation of aids **are treated in specific exemption regulations** (assessment of aid intensity). Some exemption regimes may be withdrawn by the European Commission when there is evidence of distortion of competition.

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- Specific rules under each specific support instrument – The case of **demonstration phase**.
  - **Ex: NER 300 draft decision**: (4) Funding under this Decision should be conditional on clearance by the Commission of any State aid component of the overall financial contribution from public sources pursuant to Articles 107 and 108 of tghe TFEU with a view to ensuring that funding is limited to the extent necessary for implementation and operation of project, taking into account potential negative effects on competition. The Member States should therefore notify the Commision of any finanacing involving State Aid pursuant to Article 108(3) of the Treaty …"
  - But **financing can be combined with other instruments**, also because NER 300 financing is not part of the general budget of the EU.
- From demonstration to deployment and commercialisation.
  - Are the EU rules in place under emissions trading or CCS regime at the **commercial phase** sufficient to avoid accumulation of aid (not necessarily illegal state aids)?
  - Are the necessary rules in place **internationally** to avoid national subsidies to fossil fuels for a plant eligible to generate international CCS-project allowances on the CDM market?

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4. Conclusion

- Fossil fuels, including coal, will remain a component of the energy mix in the coming years, both at the EU level and internationally.
- Concern: CCS funding, e.g. through emissions trading, **should not continue incentivising unnecessarily fossil fuels**. Accumulation of aids to plants using CCS should not distort competition either.
- Dealing with accumulation of subsidies to fossil fuels appears to be **a complex matter**: rather clear "commitments"; but **difficult evaluation of aid volume** and **no reporting requirement**; provisions contained in **different pieces of legislation**.
- The EU regime provides a good example of efforts to avoid accumulation of aids to fossil fuels and CCS projects. Should/Could it be transposed? Rules and energy supply context might also differ in countries more dependent on coal than the European Union.
- Challenges:
  - The role of law in keeping the balance and regulating accumulation of aids. What is the better suited legal basis: subsidies regulation or CCS regulation?
  - The international dimension of emission trading and large amount of fossil fuels subsidies in benefiting countries from CDM market. In the perspective of an international market for CCS-based CDM credits, is there a sufficiently consistent framework internationally to tackle these issues?

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Thank you for your attention!

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