



Agora
Energiewende



Making State Aid Work for Europe's Decarbonisation

State aid decisions on carbon-pricing

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Objectives of the project

- **Analyse** the Commission's decision-making practice on State aid cases relating to decarbonisation and the clean energy transition
- Confront the decision-making practice with **realities** of the energy market and the necessary transition to a decarbonised European power system in line with **EU climate and energy targets**
- Raise awareness of the **importance of State aid decisions for decarbonisation** and the need for **consistency**
- Engage with **decision-makers** and **stakeholders** on how to provide that state aid decisions and market-forces work in support of decarbonisation and the clean energy transition

Project events in Brussels

- Workshop #1 – Capacity Mechanisms (7 May 2019)
- Workshop #2 – Renewable Energy (22 October 2019)
- Conference – State Aid Perspectives on the ‘Coal to Clean Transition’ in Europe (14 November 2019)
- Workshop #3 – Industry Decarbonisation (3 December 2019)*
- Workshop #4 – Energy Efficiency & District Heating (17 December 2019)*

*** Please contact us if you are interested in attending one of the final project workshops**

Project website



The screenshot shows the website header with logos for ClientEarth, Agora Energiewende, the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, and the European Climate Initiative (EUKI). The main title is "State aid for a Decarbonised Europe". A navigation menu includes: Introduction, Case studies, Latest news, FAQs, The team, Contact, and About this project. Below the menu is a large image of solar panels. The "Introduction" section contains the following text:

EU State aid decisions have a major impact on how markets enable decarbonisation and the energy transition. The project analyses recent State aid decisions as to their consistency with decarbonisation objectives and the energy transition. Case studies are used to engage with decision-makers and stakeholders. Our objective is to raise awareness of the importance of State aid decisions for decarbonisation and the need for consistency to ensure that market forces work in support of decarbonisation and the energy transition.

The "Case studies" section begins with: "Our case studies are based on decisions made by the European Commission that authorise Member States' aid measures in the energy sector. We have selected the themes of renewable energy, capacity mechanisms, energy efficiency, carbon pricing and industry decarbonisation, either because of the perspective they provide due to a large number of cases since 2014, their controversial nature, or their..."

At the bottom right of the screenshot, there is a green button that says "Sign up for case study alerts →".

- We have just launched a project website, which will serve as an online repository with communication material on EU state aid decisions relevant for climate protection and the EU's energy transition.
- The website will provide transparent, reliable and well-documented case studies analyzing the track-record of past state aid decisions and guidelines in driving the energy transition and identify the critical steps and elements in state aid decisions that should be improved to align EU state aid decision-making with Europe's climate and energy targets.

Topics selected for discussion - Overview

- **Environmental taxation in the Non-ETS Sectors**
- **Industry exemptions under a Carbon Price Floor**

* Indirect cost compensation under the EU ETS and reductions from renewable energy support charges for energy intensive users will be discussed during the workshop on Industry Decarbonisation (3 December 2019)



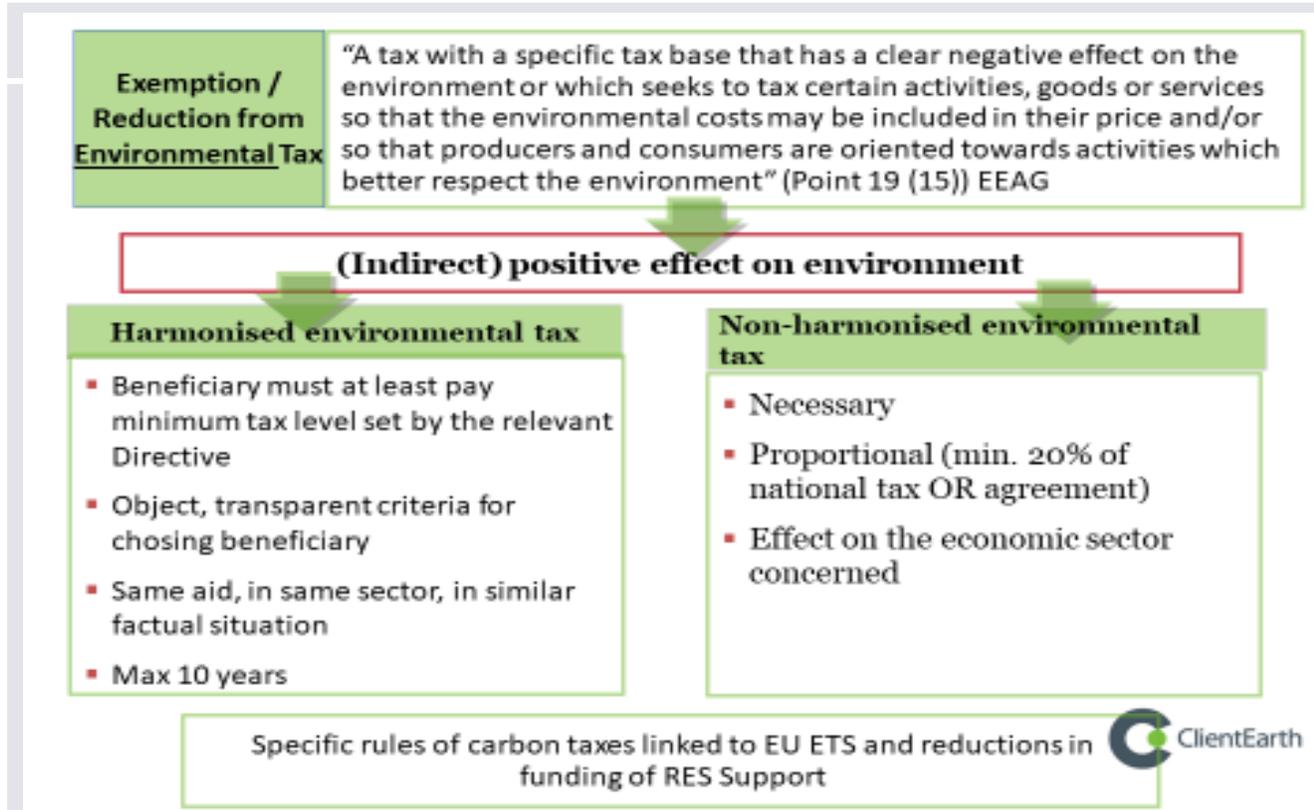
Environmental taxation in the Non-ETS sectors



Compatibility rules in the EEAG

- Direct taxation falls within the competence of the Member States, but **Member States must exercise their tax competence consistently with EU law.**
- **EEAG:** The overall objective of environmental taxes to discourage environmentally harmful behavior by internalizing its cost to society should not be undermined. Thus **in principle the tax per unit of pollution should apply the same for all emitting firms.**
- Reductions in or exemptions from environmental taxes **may adversely impact that objective** and in many cases, the firms benefitting from the tax reductions **are the ones with the most harmful behavior** targeted by the tax.
- However, **exemptions from energy taxes are permitted under certain circumstances** to ensure that the most energy intensive industries are not disproportionately burdened in a way that would put them at a competitive disadvantage with companies in less heavily taxed jurisdictions.
- Member States must demonstrate that: a) the reductions are **well targeted** to those most affected by a higher tax and b) a **higher tax rate** is applicable than would be the case without the exemption (i.e. exempting some enables the state to tax others more for better environmental protection).

Compatibility rules in the EEAG



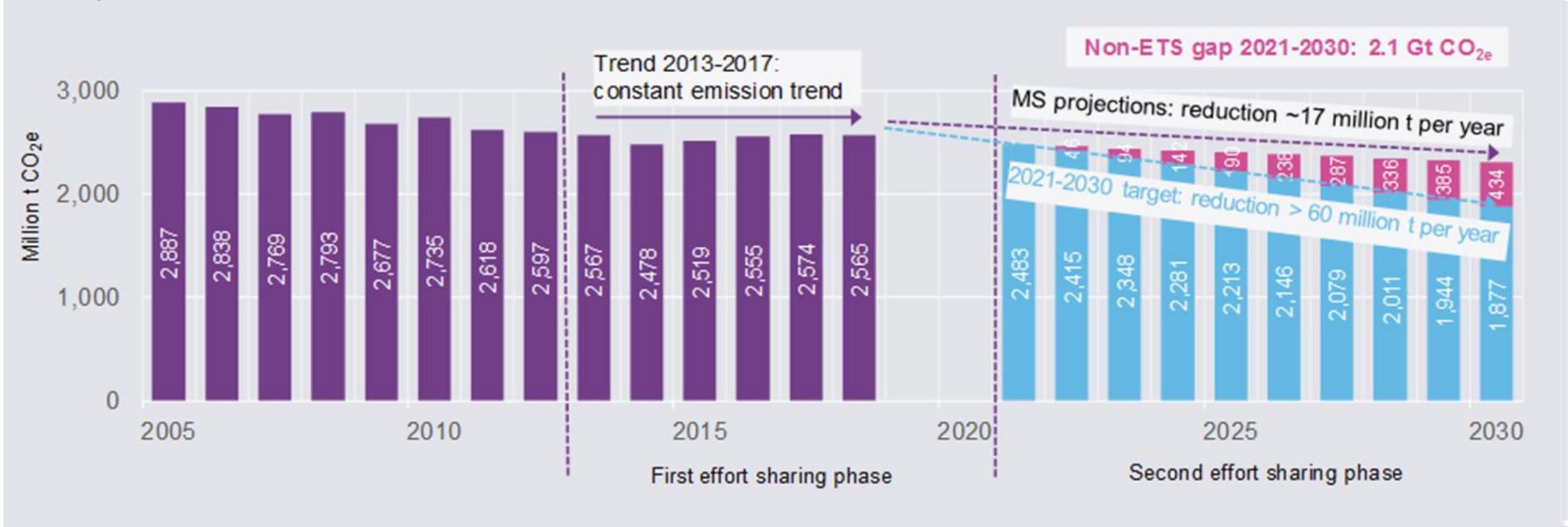
- Tax refund or reduction of tax rate
- Energy Taxation Directive 2003/96/EC
 - Necessity and proportionality presumed
 - Incentive effect presumed if under Art. 44 GBER > applies to all except biofuels subject to a supply or blending obligation
- For carbon taxes directly linked to the EU ETS allowance price and that aims at increasing the allowance price, compensation is possible
 - A) ETS State aid guidelines
 - B) Payment as a lump sum

Source: Client Earth

(1) CO₂-oriented energy taxation is needed because Member States must significantly increase their efforts to achieve their 2030 non-ETS targets under higher ambition



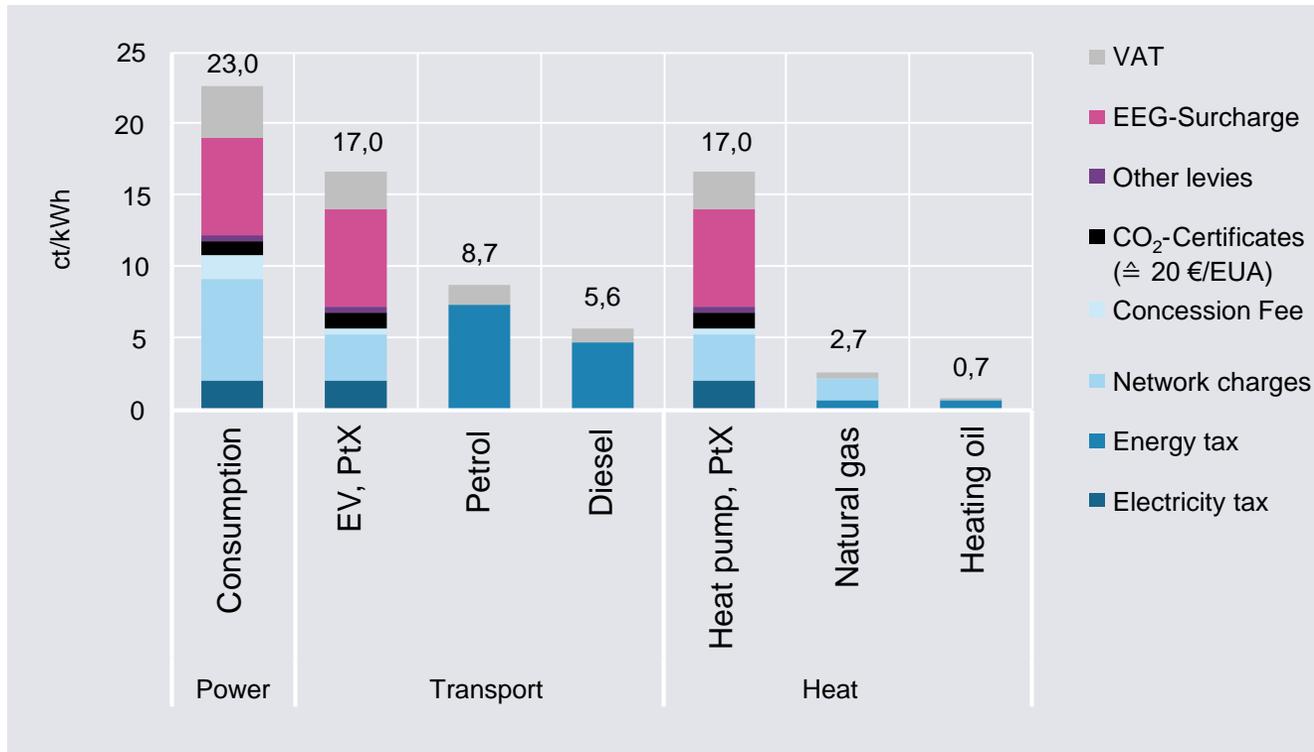
Non-ETS emissions in the EU-28 for an EU -50% 2030 GHG target. Past emissions, yearly emission budgets, projections based on existing measures



Own calculations based on EEA data

(2) CO₂-oriented energy taxation is needed because direct and indirect electrification of transport, heat and cool are critical to the success of the energy transition

Energy-related regulated cost components for German households



Agora Energiewende (2018)

- While the ETS is beginning to deliver higher carbon prices, **CO₂-Pricing is currently missing in large parts of the heating & transport sectors.**
- Environmental & energy taxation differs **significantly across Member States** for the non-ETS sectors.
- Harmonized EU minimum tax levels are far below the current ETS price.
- As a result, **taxes, levies and surcharges on electricity are often high in comparison to those for fossil fuels** in heating and transport despite the need for greater electrification.
- **Energy intensive industry is exempted** from energy taxes & levies, but faces international competition and risk of carbon leakage.

The Energy Taxation Directive has the potential to be the key EU coordination tool for a CO₂-oriented energy taxation reform



- The EU Energy Taxation Directive of 2003 lays down rules for the taxation of energy products used as motor or heating fuels and for electricity. Specifically it sets **minimum levels of taxation** and lays down the **conditions for applying tax exemptions and reductions**.
- **The primary objective of the ETD is to support the proper functioning of the internal market** by avoiding double taxation and other distortions of trade and competition. Environmental protection is currently still treated as a secondary objective. For example, **no link exists between the minimum tax rates of fuels and their energy content and CO₂ emissions**. A 2011 COM proposal to reform the ETD in this direction was withdrawn in 2015 after failing to convince Member States.
- In principle, the **Member States are free to apply excise duty rates above these minimum levels of taxation**, according to their own national needs and environmental ambitions.
- **All revenues from excise duties entirely go to the budget of the Member States.**
- A recent COM evaluation of the ETD finds that the high divergence in national energy tax rates and broad use of exemptions is not in line with other policy instruments, can lead to fragmentation of the internal market and could significantly hamper EU objectives in the field of climate & energy.

State Aid Case Studies

- **UK (2014-2023):** Reduced rate of Climate Change Levy for EIUs that have entered into a Climate Change Agreement with the Environment Agency → 90% reduction for electricity and 65% reduction for gas and solid fuels. Taxation base of the Levy: consumption of electricity, gas and solid fuels (coal, lignite, coke, petroleum coke). Umbrella agreements per sector & individual agreements
 - *Since 2014: GBER, Art. 44. Before 2014: notifications and some formal investigations*
- **France (2016-2020):** increase of tax on energy consumption from €0,5/MWh (EU minimum level) to €22.5/MWh → decision to relieve EIUs from this increase and avoid that they be so disadvantaged that maintaining the environmental tax would become impossible. Beneficiaries: industrial EIUs (rate at €2, €5 or €7.5/MWh); hyper-intensive users (rate at €0.5/MWh); guided transport (rate at €0.5/MWh).
- **Sweden:** Lower energy tax rate for fuel consumed for heating and operation of stationary engines in the manufacturing industry and cogeneration outside the EU ETS, prolonged 2018-2020 → GBER, Art. 44. In 2008-2018: reduction from the CO2 tax on fossil fuels for fuels used in (1) industrial activities, (2) heat production in CHPs and (3) other heat production, all beneficiaries participating to the ETS → compatible with the 2008 EAG and Art. 17 ETD

Reflections

- Taxation remains a Member State competence, but some state aid principles (eg. Environmental taxation) and harmonized legislation (eg. the Energy Taxation Directive) apply.
- Efficient decarbonization of the non-ETS sectors will require CO₂-oriented energy tax reform for heating and transport fuels on EU or MS level. A reform of the Energy Taxation Directive could play an important role in harmonizing minimum energy taxation based on CO₂ intensity across Europe.
- The ability to exempt trade exposed energy intensive industries from part or most of these costs is likely to be critical to gaining support for a revision of the Energy Taxation Directive and domestic tax reforms, but could raise concerns about internal market distortions and cost distributions, as already highlighted by the recent COM evaluation of the ETD.
- **Harmonised taxes under Energy Taxation Directive:** What use of the simplified approach in Section 3.7.1 EEAG since Article 44 GBER covers them with no notification threshold?
- **Non-harmonised taxes:** Are the negotiated agreements credible? Is monitoring adequate?



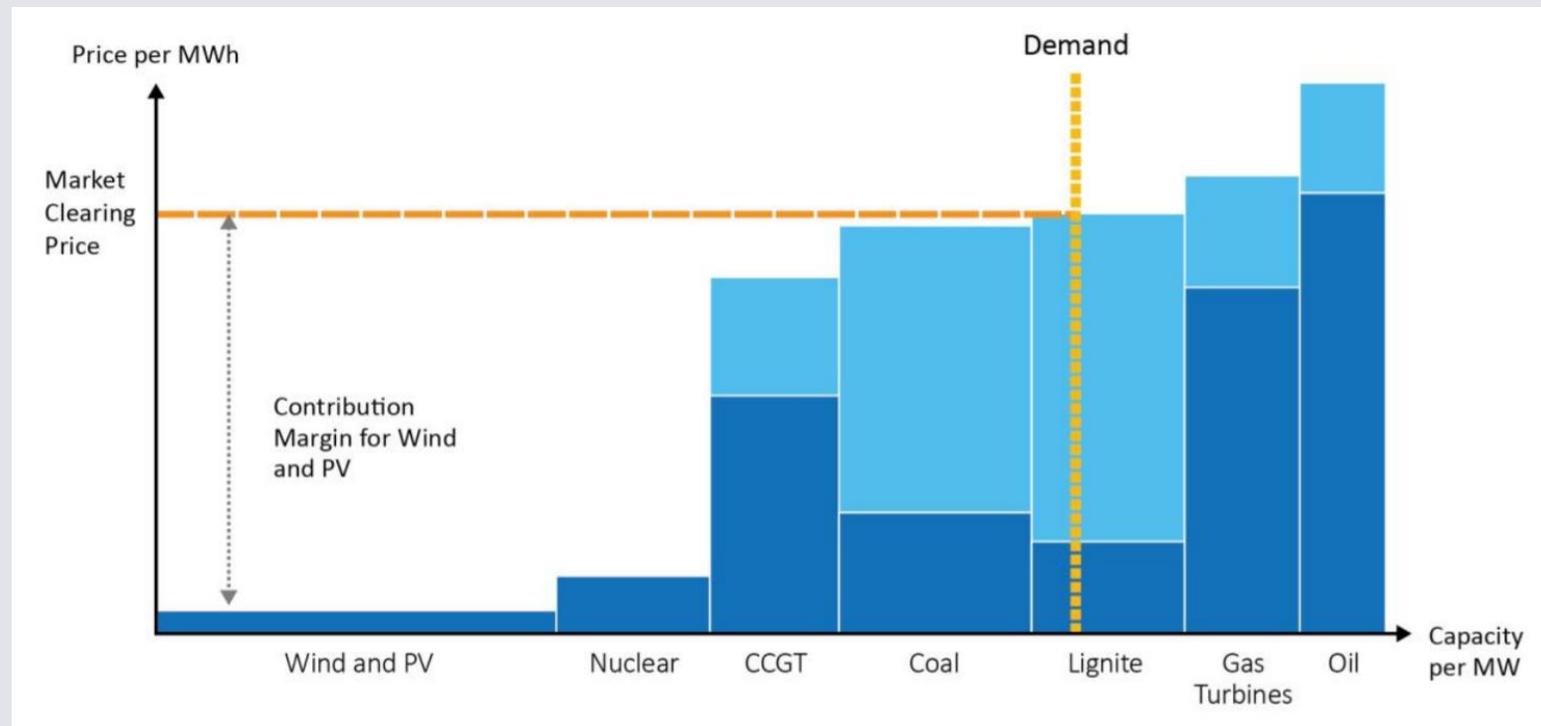
Industry exemptions under a Carbon Price Floor



Carbon pricing makes CO₂ intensive power generation less competitive relative to clean generation. Current ETS prices are forcing fuel switch from hard coal to gas.



Effects of carbon pricing on merit order in competitive wholesale markets

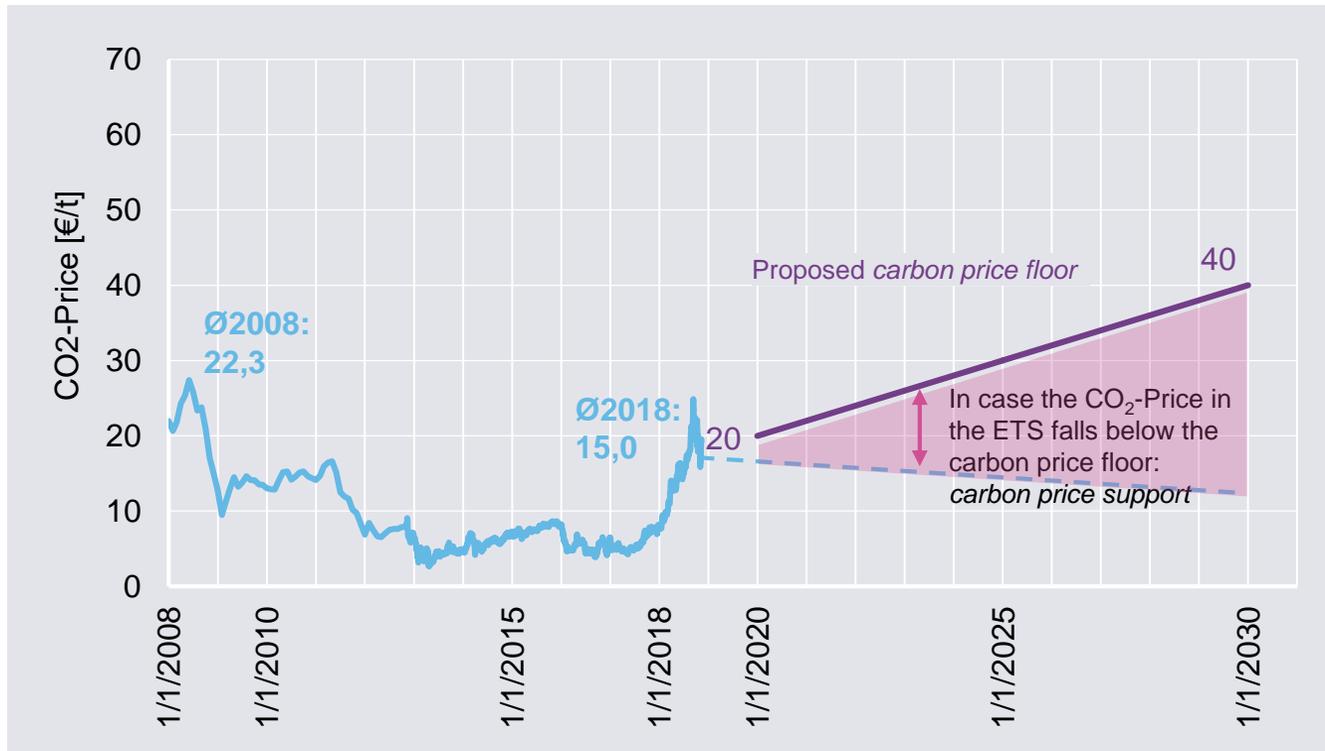


Source: IEA-RETD (2016) - Note: The dark blue area indicates the price of the generation technology without externalities priced in, whereas the light blue area refers to the additional price associated with carbon pricing.

A Carbon Price Floor under the EU-ETS would create investment certainty by reducing risks for investors in climate mitigation technologies



Proposal for a CO₂ carbon price floor in the ETS

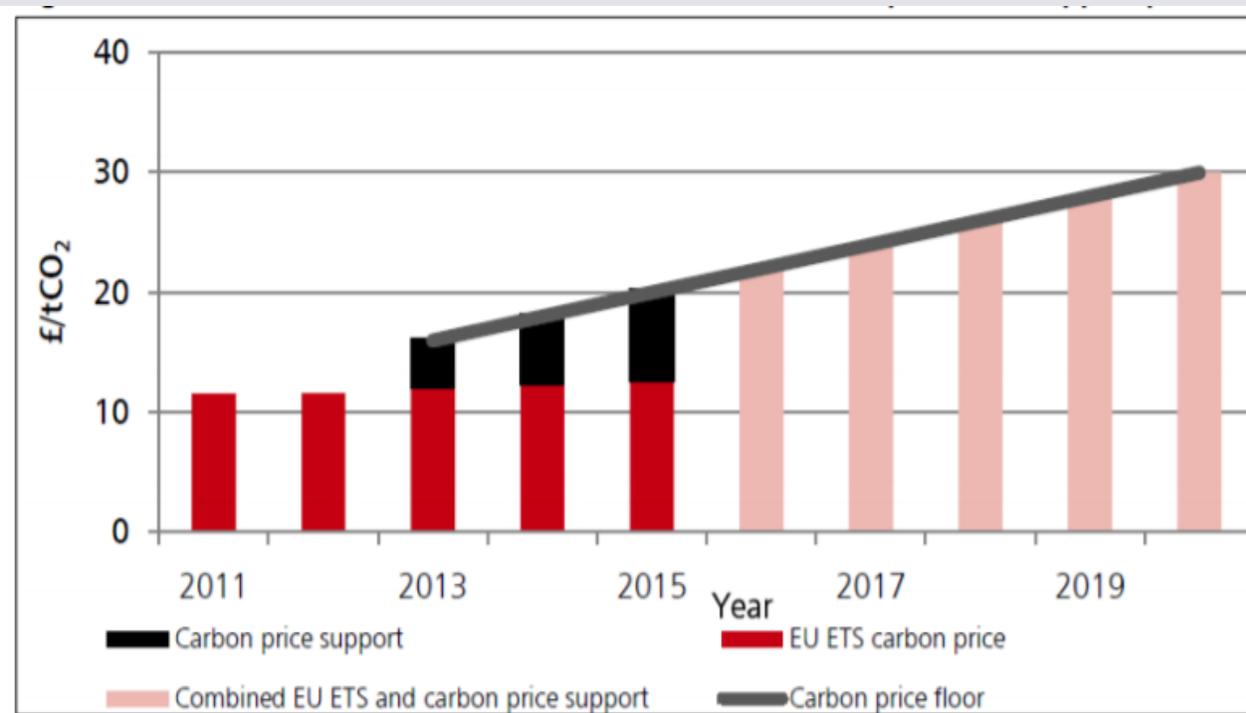


Agora Energiewende based on EEX, DEHSt

- A carbon price floor, can be implemented as an: 1) **auction reserve price** or 2) a **surrender charge**.
- Under an **auction reserve price**, the regulator sets a minimum auction price (reserve price) level below which no allowances will be sold.
- A **surrender charge** is in place when some or all emitters have to pay a top-up charge representing the difference between the market price of allowances and a set minimum price.
- EU-wide implementation will require a common initiative by progressive Member States.
- FR has called for an EU-wide CPF. The NL is currently in the legislative process to introduce a minimum carbon price for electricity production. FI is exploring options for an EU-wide or Nordic minimum price.

The UK has the only Member State to have adopted a CPF in the EU to date

Carbon price floor illustration



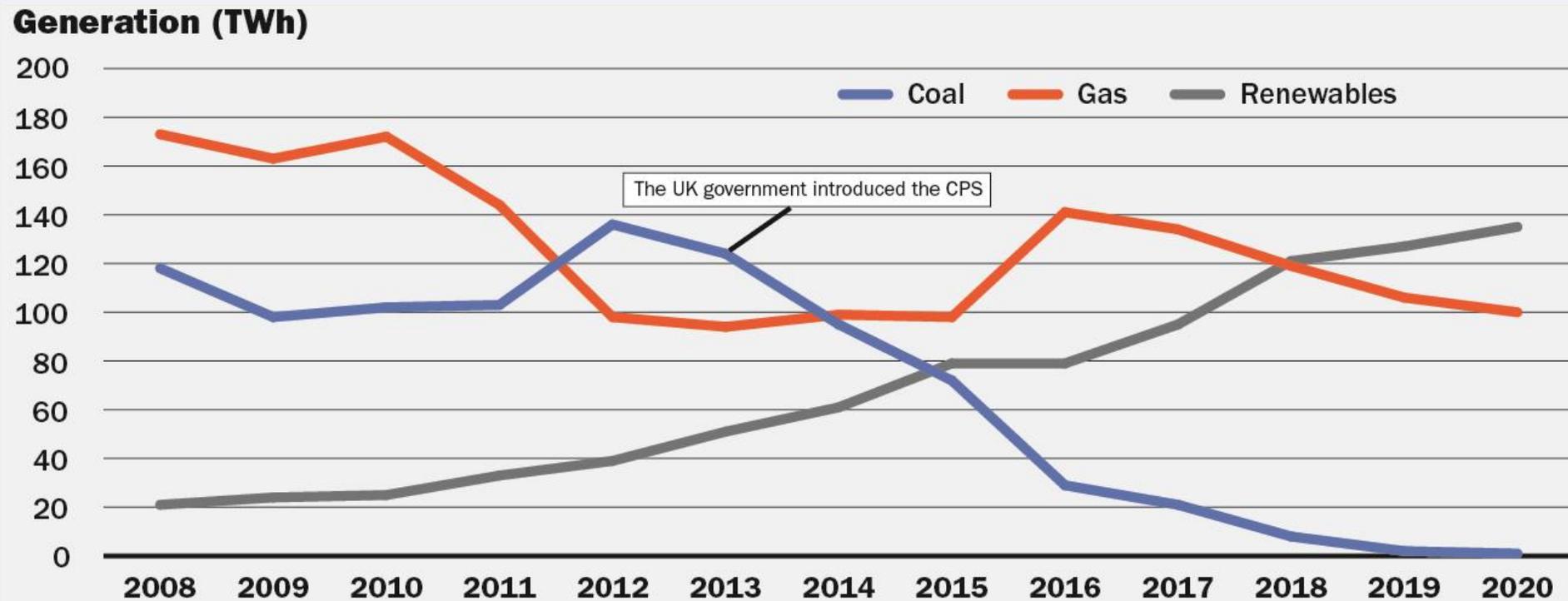
Source: HM Treasury 2011

- In April 2013 the UK introduced a 'carbon price floor' consisting of: (i) the **EU ETS allowance price**; and (ii) a **Carbon Price support (CPS)**.
- When the CO₂-Price in the EU-ETS falls below the *carbon price floor*, a **Carbon Price Support charge is applied to fossil fuels used for electricity generation based on their emissions factors**. No CPS is levied if the ETS price is above the *carbon price floor*.
- The CPS rates are set by the Treasury, paid by owners of electricity generating stations and charged as a component of the Climate Change Levy. **The CPS does not apply to industrial installations covered by the ETS.**
- The Carbon Price Floor was introduced at a rate of £16 per tCO₂e, and was set to increase to £30 by 2020 and £70 by 2030. However, **in 2014 the government decided to cap the CPF at £18.08 (€20.40) until 2021.**

The CPS has played an important role in forcing coal out of the UK generation mix



UK electricity generation mix (in TWh)



Source: [ICIS \(2019\)](#) based on BEIS

State Aid Case Study

- “The UK believes that **there is a compelling environmental case for taxing the use of fossil fuels in electricity generation**, particularly given the relatively high proportion of fossil fuels used to generate electricity in the UK, which the UK submits account for about 75 per cent of electricity generation, of which natural gas represents 46 per cent and coal 28 per cent.” (COM decision 2014)
- *But:* A support package announced in 2011 aimed at compensating energy intensive industries for the estimated impact of the higher electricity costs triggered by the mandatory CPF (approx. £5/MWh, £100 million in total) was approved by the Commission on 21 May 2014.

Description of compatibility rules in the Guidelines



- When a carbon tax is levied on energy products used for electricity production, electricity suppliers are liable to pay the tax and may pass electricity price increases on to the electricity consumer. Such a carbon tax can be designed in such a way as to be directly linked to the Union ETS allowance price (§179 EEAG).
- Compensation may be considered when a tax linked to the EU ETS allowance price and aimed at increasing the allowance price is applied (§180 EEAG). For this exemption to be granted, the compensation scheme must meet **three cumulative conditions**:
 - 1) The aid can only be granted to sectors and subsectors listed in Annex II of the ETS State Aid Guidelines to compensate for additional indirect costs resulting from the tax.
 - 2) Aid intensity and maximum aid intensities are calculated as defined in paragraphs 27 to 30. The ETS allowance forward price can be replaced by the level of the national tax.
 - 3) The aid is granted as a lump sum that can be paid to the beneficiary in the year in which the costs are incurred with ex-post-monitoring to avoid over-payment or in the following year.
- The instrument shall also be compatible with the Energy Taxation Directive.

State Aid Case Study

- “Beneficiaries: Annex II of the ETS Guidelines + their indirect emission costs, as a result of the combined effect of the EU ETS and the CPS, will be equal to at least 5% of their gross value added = same beneficiaries as for the exemption from the ETS carbon price (*authorised by COM in 2013*)
- Level of compensation calculated as per formula in ETS Guidelines. Compensation for 85% of the eligible costs incurred in 2014 and 2015; 80% in 2016, 2017 and 2018; and 75% in 2019 and 2020.
- COM: used the EEAG in anticipation and concluded that the measure ‘would further EU energy objectives without unduly distorting competition in the Single Market’.

Reflections

- While not eliminating the need for a robust enabling framework for clean energy investments, a *Carbon Price Floor* under the EU-ETS would create investment certainty by reducing risks for investors in clean energy technologies.
- State aid questions are raised by concerns over the need to exempt energy intensive industry from the costs resulting from higher ambition. Exemptions for EII under the UK CPF suggest that the current EEAG enable these exemptions in the case of a surrender charge.
- For an EU-wide CPF implemented via an Auction Reserve Price, the ETS State Aid Guidelines and system of indirect cost compensation would apply.
- Notably, while the UK use the EEAG for the the legal basis for the exemptions for their surrender charge, they have applied Annex II of the ETS Guidelines for determining the eligibility of beneficiaries.
- UK carbon price floor exemptions adopted under the future guidelines, instead of using the old ones.



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Thank you for your attention

Do you have further questions or comments? Please contact us at:

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The project Making State Aid Work for the Decarbonisation of Europe is part of the European Climate Initiative (EUKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU).

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based on a decision of the German Bundestag

