Does carbon pricing have a role and how might it be implemented?

National approaches

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The EU ETS remains the central instrument to achieve 2030 GHG target

- As a **technology neutral and economy wide instrument**, the EU ETS is a key enabling instrument.
- However, **complementary measures** remain necessary to drive low carbon investments

- **Carbon pricing raises revenues that can be channeled:**
  - To fund complementary policies alongside carbon price
  - To compensate declining sectors in order to smooth the transition
After 10 years of functioning: what “modest” EU carbon price can (and cannot) contribute

**CAN:**
- Lead to some fuel-switching in existing operations
- Make near-to-market low-carbon technologies cost-effective
- Backstop other low-carbon support policies

**CANNOT:**
- Drive all necessary low-carbon investments
- Force early retirement of high-carbon assets
- Give strong signal for electrification of heat and transport

![Figure: The EUA and CER Prices](image-url)
Without a credible long-term target, the growing EUA surplus undermines the EU ETS.

- A large surplus has been building on in the EU ETS without any perspective to decrease before 2030 - amounting to 2.1 billion in 2014, and is expected to reach 2.6 billion in 2020.

There are no perspectives for a balanced EU ETS and an efficient carbon price by 2030.
The main challenge of the EU is to align its ETS price with its long term ambition

- **Two major weaknesses of the EU ETS:**
  - A strong long-term “investment signal” is lacking, and needs a more credible commitment to long-term allowance scarcity to emerge
  - The EU ETS is vulnerable to external shocks or interactions:
    - Strong policy interactions and insufficient ambition left the EU ETS vulnerable to demand shocks
    - A lack of regulatory clarity to respond to extraordinary circumstances
- **Two major risks:**
  - Lack of long-term visibility for investors
  - Lock-in effect on low-carbon investments

The challenge by 2030: designing a credible EU ETS in line with EU climate long term objectives
The EU ETS reform package: the EU Commission proposals

- Three pieces of the EU ETS reform package:
  - “Backloading” measure implemented in 2014 with no impact;
  - “Market Stability Reserve” voted in 2015 in order to adjust the EU ETS from 2018 as a quantity corridor for the volume of allowances in circulation in the EU ETS
  - A “new pace of emissions cuts”:
    - An EU ETS emission reduction target of 43% compared to 2005 levels
    - A cross-sectoral correction factor increase to 2.2% from 2021 onwards
This MSR could not be efficient enough to recalibrate the EU ETS by 2030

- **Restoring the EU ETS short term scarcity**
  - With MSR, the surplus = 500 million in 2030
  - Without MSR, the surplus = more than 3 billion

- **Improving its resilience to external shocks**
  - Simulation of overachieving RES policies (55% in 2030 in power sector) and a strong downturn in 2025 similar to 2008
  - With MSR, surplus = 1,300 MtCO2 in 2030, against 4 GtCO2e without MSR

- **The carbon price in the EU ETS is expected to increase but not enough!**
  - In the longer term, the MSR is expected to reduce the surplus until 500 MtCO2e in 2030, and prices are expected to increase until 30€/tCO2e (2015).

Source: I4CE- Institute for climate Economics (2015) based on European Commission, EUTL
Price stabilization, a common feature of implemented ETSs

- **Low carbon prices:** Carbon prices are (mostly) far from levels that would drive low-carbon transition

- **Different carbon pricing systems have different objectives and designs** - what “works” depends on national’s perspective

- **Dealing with uncertainty and stabilisation** a common feature of ETS systems implemented
A sample of experiences of ETS operating with a minimum floor price for GHG allowances

<table>
<thead>
<tr>
<th>Carbon markets</th>
<th>Minimum price per tCO₂</th>
<th>Maximum price per tCO₂</th>
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<tbody>
<tr>
<td>California</td>
<td>In 2015: 12.10 USD [10.80 €] + (5% + inflation) /year</td>
<td>In 2015: 45.20 USD, 50.86, and 56.51 [36.34 € - 45.43 €] + (5% + inflation) /year*</td>
</tr>
<tr>
<td>Quebec</td>
<td>In 2015: 12.08 CAD [7.80€] + (5% + inflation) /an</td>
<td>Convert from the Californian price ceiling**</td>
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<td>In 2015: 44.96 CAD, 50.58, 56.2 CAD [29 € - 36€]</td>
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<td>RGGI</td>
<td>2014: 2.00 USD [1.78€] + 2.5%/an</td>
<td>2014: 4.00 USD [3.56€] increasing to 10.77USD [9.61€] in 2020**</td>
</tr>
<tr>
<td>Beijing</td>
<td>Government can buy allowances on the market if the average carbon price during 10 days is lower than 20 yuan [2.7€]</td>
<td>Government can sell allowances on the market if the average carbon price during 10 days is higher than 150 yuan [20.7€]</td>
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<tr>
<td>Guangdong</td>
<td>CNY 25 [3.27 €] à CNY40 [5.24 €] + CNY5 [0.65 €] to each quarterly auction</td>
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<td>South Korea</td>
<td>KRW 10 000 [7 €]</td>
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<tr>
<td>New Zealand</td>
<td>NZD 25 [16 €]</td>
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Source: I4CE, Thomson Reuters, ICAP – 2016
The French initiative:  
Introducing a carbon price corridor

- **The Mestrallet-Canfin-Grandjean report:**
  - The current price signal is not coherent with the EU’s COP21 objective (80-95% by 2050 for 2 degrees)
  - Waiting for the MSR to kick-in just means that we are rolling the dice
  - 10 recommendations: 2 recommendations for a carbon price floor at the EU and French level

- **A few numbers from the COM’s papers to support this:**
  - Impact assessment of the 2030 energy and climate framework (2014): the LRF of 2.2% leads to -84% in 2050 instead of -90% (footnote 122) and the resulting price for the 2030 objective would be between 22 €/t and 40 €/t (p 138)
  - Roadmap for moving to a competitive low carbon economy in 2050 (2011): The EU ETS carbon price needed to comply with the ETS directive rises from €36 per ton CO2 in 2030 (in constant prices of 2008) to €100 to €370 by 2050
The French proposal: Introducing a carbon price corridor

1. At the EU Level:
   - The French government announced in February 2016 its proposal to introduce a soft price corridor for the EU ETS.

2. At the French level:
   - The French government announced in April 2016 its intention to implement a carbon price support in order to reduce the carbon emissions from the power sector.
   - In July, following the publication of the Mestrallet-Canfin-Grandjean report, the government announced that this measure would apply only to coal-fired power plants.
The French proposal: 1\textsuperscript{st} option - designing a soft collar price on the EU ETS

How to implement it technically?

- Adjustment of the allowances supply though auctions;
- Creation of an independent authority;
- Replacement of the MSR current activation criteria.

How to set the price?

- Based on a desired carbon price level in 2030?
- Based on the level of historical prices, increased by a certain percentage annually? (e.g. in North America)
1\textsuperscript{st} option - A carbon price floor on the EU ETS: Implications

- **Additional abatements**
  - Coal-to-gas switch: a 30€ price floor would lead to emissions reductions of more than 100 Mt annually only in the power sector (RTE-ADEME, 2016)
  - Industrial adoption of more efficient technologies

- **Increase of MS revenues**
  - The increase in carbon prices is expected to more than compensate the decrease in auctioning volume (Thomson Reuters, CEC, 2016)

- **Benefits for low-carbon investments:**
  - Predictability for low-carbon investments decisions
  - Prevention of carbon-intensive technologies lock-in
2\textsuperscript{nd} option - A carbon floor price on the French power sector

- Three possibilities for its implementation were considered in April 2016:
  - Implementing an uniform tax on the power sector
  - Increasing the tax on coal (TICC) or implementing a differentiated tax whose level depends on the power plants’ efficiency
  - Implementing technical emissions standards for power plants

- Only the two last options are being considered, to cover only coal power plants.

- Should be enclosed in the 2017 finance bill.
2nd option - A carbon floor price on the French power sector: implications

- In case of a uniform tax on the power sector:
  - Increase of power prices
  - Increase of power imports
  - Decrease in the profitability of gas-fired power plants
  - Low net emissions reductions

Qualitative impacts of the three implementation options, Canfin-Grandjean-Mestrallet mission

<table>
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<tr>
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<th>Effect on GHG emissions</th>
<th>Effect on power prices</th>
<th>Effects on the security of supply</th>
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<td>Tax on the power sector</td>
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<td>Tax on coal power plants</td>
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<td>Emissions standards</td>
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In any case, what should be done with the unused allowances? (Ian Duncan’s proposal)
Conclusion – Reforming the EU ETS through national approaches: how to ensure coherence?

- The EU ETS could be the driver of the transition towards a low-carbon economy if its objective is clarified:
  - Delivering emissions target efficiently
  - And/or driving low-carbon investment

- If both, a credible EU ETS in line with EU climate long term targets is required.

How to move forwards to trigger low carbon investments?

1. **Breaking the tragedy of horizons**: how to fix the 2050 EU ETS ambition?
2. **Reforming the EU ETS with “technical” fixes**: the challenge of the impossible policy consensus between Member States;
3. **Introducing national measures** to support carbon pricing: the need of coordination between EU and national level to manage interactions;
4. **Addressing the resilience of the EU ETS upfront through governance of the energy system**: what about national energy plans proposed in the EU 2030 climate and energy Communication in 2014? (a more “bottom-up approach” inspired from the Paris agreement);
5. **Mobilizing climate finance instruments**: carbon pricing is necessary but not sufficient.
Thank you for your attention!

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Download our report
Exploring the EU ETS beyond 2020
http://www.i4ce.org/download/copec-report/