

The case for Carbon pricing in the EU

11 January 2019

Emmanuel Tuchscherer, Director for European Affairs, ENGIE

1. The EU achievements in decarbonisation policies are marginally driven by carbon pricing

In the past years the EU confirmed its leadership in the fight against climate change both in terms of political traction and results. The EU set itself **pioneering GHG reduction targets** (20% by 2020 and 40% by 2030 compared to 1990), acted as a **diplomatic leader** in the negotiation of the Paris Agreement in 2015 and laid down a set of legislation aimed at translating them into results in Member States.

The current Juncker Commission made the fight against climate change one out of its ten priorities, crossing many sectors of EU legislation. It has materialised the reform of the EU ETS and the Effort sharing regulation, and in the **“Energy Union”** program pushed by Commissioner Arias Cañete through an unprecedented legislative work: The so-called **“Clean Energy Package”** entails 8 legislation pieces, more than 6000 pages, along with the Clean Mobility Package, which for the first time set CO2 targets in the heavy-duty sector of mobility. Other cross-sectoral policies comprise climate targets such as the Juncker Plan (315 bn euros, 20% for energy transition and climate mitigation), and initiative on sustainable finance, the greening of the future EU budget, etc.

As regards decarbonisation targets EU policies are successful: The EU has already achieved its 2020 Kyoto target of reducing greenhouse gas emissions by 20 % (compared to 1990) ahead of schedule. **The EU will likely overachieve its 2040 objective, GHG emissions are lastingly disconnected with the GDP growth**, contrary to other major developed economies (cfr. the United States).

But carbon pricing has not played the prominent role it was supposed to play when the EU ETS was set up in 2005, for several reasons:

- First and foremost, **the EU carbon market covers only 45% of the EU CO2 emissions**, the 55% remaining being handled by common EU objectives, but policies are left to the Member States. In this sector **unanimity in fiscal policies is an obstacle** to progress towards harmonisation.
- Secondly, **ETS prices remained too low to effectively drive decarbonisation**, basically because of its lack of flexibility and of a mechanism that ensure real-time adaptations to demand variations.
- Thirdly, the **EU energy and climate framework has implemented overlapping policies**: EE and RES objectives are undermining the EU ETS: studies find that higher percentage of EE and RES depress the carbon price within the EU ETS. This situation has been worsened by the Clean Energy Package, by increasing RES (32%) and EE targets (32,5%), for the benefits of climate, while deviating from a cost-effective pathway for decarbonisation.
- Last but not least, **competing national measures have overtaken EU ambitions**: unilateral decisions such as the **introduction of a carbon price floor in the UK** under the form of a “top-up” tax; and especially **coal phase-out** processes in France (2022, 3 GW), Sweden (2022, 0.1 GW), Italy (2025, 9 GW), Finland (2025, 2 GW), Portugal (2025, 2 GW), Austria (2025, 0.6 GW), the Netherlands (2030, 5 GW). This means that malfunctions of the ETS could cause of renationalisation and “balkanisation” of energy and climate policies.

2. New action must be taken to quicken the pace of the energy transition in accordance with the Paris Agreement

The current energy and climate framework was designed before the Paris Agreement and is likely to be insufficient to meet the medium- and long-term EU climate commitments.

EU energy and climate policies are somehow **short-sighted and myopic since their horizon stops in 2030** and does not set a consistent vision of a cost-effective decarbonisation trajectory to carbon neutrality between now and mid-century.

The **Long-term strategy for climate** published last December helps understand that meeting a net zero emission target requires a swift scaling up of efforts rather than making parametric adjustments to the current framework. It states that **in a “business as usual scenario” net GHG emissions reduce by 48% by 2030 and only 64% by 2050 compared to 1990.**

The current functioning of the EU ETS makes it heavily dependent on the economic performance, parallel policies (energy efficiency, RES support, nuclear support, coal phase-outs) and speculative behaviours as shown by the sharp increase in prices in the past months, before the entry into force of the MSR reform.

To meet the Paris objectives early action is necessary, **leveraging on the sectors where the potential for emissions saving is the strongest. The power sector comes first** because climate mitigation means a combination of investments decisions in renewable and the retirement of old assets.

In the power sector urgent action is also needed to **phase out coal power plants**, the most emitting technologies both in GHG and in local pollutants.

Yet the current ETS prices (approx. 20/25 euros) is insufficient, both in a short term and medium-term perspective:

- **in the short term** it is too low to trigger a shift between coal and gas: the FTI study finds that sustained coal and lignite to gas switching across Europe would require **prices around €15-35/t in the near term, but in the 2020s would require around €20-50/t.** [In the long run, carbon prices may need to reach between 130-150€/t from 2040 based on Commission and IEA modelling].

- **in the medium term** too low and unclear price signals could lead to a technology lock-in for fossil fuel technologies and the risk of stranded assets; they are insufficient to **incentivise large scale renewables on a merchant basis; carbon prices alone cannot solve market design issues.** Investors in clean technologies see falling technology costs but **increasing market risk.** Carbon price risks increase power price and increases the cost of capital (increase the risk premium, reduce debt levels and reduce the pool of investors).

To accelerate the pace of decarbonisation policies, coal phase-out comes second just after energy efficiency measures.

ENGIE is in line with the analysis of the EU Commission as it considers **energy efficiency as the foremost vector of decarbonisation** that combines many advantages.

Greening the remaining fossil energy comes second, with coal phase-out of the power sector technically the quickest and most cost-effective decarbonisation vector.

- since **coal accounts for 18 % of the EU total GHG emissions and 42 % in the electricity sector (2017), a coal phase out could meet 60 à 70 % of the efforts to reach the 2030 target.**

-the **most cost-effective** way since it does not require only new investments but a partial substitution of assets in the energy sector.

- coal phase-out makes a **successful combination between energy, environment and health objectives**: according to the report “Europe’s dark cloud” phasing out coal could prevent 23 000 premature death in Europe each year.

- **electrification of new uses calls for accelerating the penetration of renewable in power sector**: a topical example is Poland which has set itself the objective of launching 1 M electric vehicles while coal still accounts for more than 70 % of the power capacity production.

3. A carbon price floor for the power sector will help remove the technology lock-in of fossil fuels and help the EU accelerate the pace of its energy transition

A carbon price floor on power prices would be the most effective option to step up decarbonisation in the energy sector. Different implementation models can be used:

- **an additional mechanism at national level: a top-up tax on the power sector** above the ETS price, based on the UK model, which has produced dramatic effects (in 2012 coal in the UK accounted for 40 % of the power production; less than 4 % in 2019).

- **features in the framework of the EU ETS** such as a **permit buy back** (the government or a market operator could commit to buying EUAs at a minimum price, an **auction price reserve** (the government could hold back permits from auction if the price goes below a certain level). These last options would work only in an EU-wide implementation of the carbon price floor.

A recent FTI Consulting study¹ (December 2018) demonstrates the benefits of a CPF set up in 12 MS as a top-up tax:

- In a high scenario (price at 20 euros/t in 2020 rising to 60 euros in 2030) power sector in CFP zone are 30% lower between 2020 and 2030 compared to a low scenario (20 euros in 2020 and 30 euros in 2030); even in the low scenario emissions reductions are made possible because investors believe in a credible carbon price.

- In the short term it accelerates the coal phase-out; in the medium and long term it lowers the price of wholesale prices to the extent that it enables greater investment in renewable capacities and reduces the cost of capital (assuming no change in market design, i.e. an energy only market).

Although a lot of political capital has been invested in the recent reforms of the EU ETS (backloading, MSR, phase 4) renewed political momentum will come from the discussions on the future climate strategy, the EU political elections and the review clause set up in the ETS and the MSR:

- The “Clean Planet for all” communication more than hints that **carbon neutrality by 2050** could be the heart of the future strategy, calling for new measures, to be debated in the first Semester by the European Parliament and Member States.

¹ <https://www.fticonsulting.com/fti-intelligence/energy/research/carbon/study-carbon-price-floor-european-countries>

- Climate change is listed in the top 3 priorities of EU citizens ahead of the **next EU Parliamentary elections**; recent success of Green parties in recent polls (Belgium, Luxembourg, Germany) materialises the growing awareness of population on climate and environment issues.

- **The EU legislative process** will offer several windows of opportunities: In 2021 (and every 5 years thereafter) the Market Stability Reserve (MSR) of the ETS should be revised to improve its functioning; then in 2023 (and every 5 years thereafter) the ETS itself will be under review, in particular the yearly decrease of the emissions cap.

To pave the way for new actions several lessons can be drawn from recent negotiations on the ETS.
For a CFP to materialise, one should think of:

- **Adopting a gradual approach to smooth out oppositions**, both by setting a price trajectory with a reasonable price target in the first years (20-25 euros that would act as a safety net without interfering in market price setting mechanisms) and to **focus a reform on the power sector** rather than trying to broaden the scope of the ETS to other sector or address an initiative on taxation in the short term.

One could also try to **fill the existing gaps first**, such as taking an initiative to set a fair price for kerosene in aviation and fuel in maritime transport, which is a request of the civil society.

- **Embedding coal dependent countries will be key**, like Germany and Poland. With the UK leaving the Union, the weight of these countries will also increase in qualified majority voting.

A freelancer strategy is doomed to fail, as shown by the missed initiative of France to push a price corridor in the ETS in 2016. If France wants to take the lead based on President Macron's proposal to set up a minimum carbon price, putting forward counterparties will be key, notably on the robustness of the commitments taken of the share of nuclear in the French energy mix.

[Poland is protecting its coal-fired power generation model and its 120,000 national jobs (including 85,000 people for mining). The country announced in 2017 the construction of a final coal-fired power plant (1 GW). Germany is also strongly opposed to reducing its electricity production from coal (37% of its electricity in 2017, 20,000 direct jobs and 30,000 subcontractors for lignite), particularly in a context of its nuclear reactors and fragile political balance. The extraction and use of coal are closely linked to the history of the country. Nevertheless, the challenge for Germany to achieve its GHG emission reduction targets for 2020 and 2030 may facilitate the adoption of a closure schedule for its coal plants.]

- **Putting forward compensation measures for the industry**: competitiveness and the carbon leakage issue is invoked by European manufacturing industry to water down ambitions. One can emphasise the advantage of a CFP that allow States to collect **extra-revenues** to mitigate impacts for most exposed energy-intensive industries and to set up transition plans for regions and industry to adapt to the energy transition.

- **Addressing the external consequences of carbon pricing policies in Europe**: bridging EU climate and environment policies with tax and trade policies will certainly be a topic for the next campaign; a carbon tax adjustment mechanism at external borders has for a long time been among French proposals but with few results for the time being. Yet this issue will have to be addressed to ensure a fair, sustainable and competitive policies in the field of climate change while protecting EU commercial and industrial interests.