BELLONA EUROPA

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Initial Considerations of 2030 Framework White Paper

The European Commission recently presented its much anticipated White Paper on the EU's 2030 Framework for Climate and Energy Policies (read more here). Although it includes strong wording on CO_2 Capture and Storage (CCS), the EU executive has scaled back its climate ambitions dramatically in the name of "cost-effective" decarbonisation. Proposed measures include an unambitious greenhouse gas emission reduction target of 40% by 2030 driven by an increase in the linear reduction factor of the Emissions Trading Scheme (ETS) from 1.74% to 2.2% in 2020. A modest but supposedly binding renewables target of 27% is also proposed.

Below is an initial review of some of the White Paper's key components:
1) CCS 2) ETS reform 3) Renewables target 4) Bioenergy

1. CCS toward 2030

In line with suggestions made by EU Climate Commissioner Connie Hedegaard, latest at the January plenary vote of the European Parliament on the CCS implementation report (read more here), the White Paper includes strong wording on CCS. According to the White Paper:

> *Greenhouse gas emissions from the EU's energy and carbon-intensive industries must come down significantly to be compatible with the EU's long term GHG objective. As theoretical limits of efficiency are being reached and process-related emissions are unavoidable in some sectors, CCS may be the only option available to reduce direct emission from industrial processes at the large scale needed in the longer term. Increased R&D efforts and commercial demonstration of CCS are, therefore, essential over the next decade so that it can be deployed in the 2030 timeframe. A supportive EU framework will be necessary through continued and strengthened use of auctioning revenues.*
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> *In the power sector, CCS could be a key technology for fossil fuel-based generation that can provide both base-load and balancing capacity in an electricity system with increasing shares of variable renewable energy.*

However, the Commission stops short of explicitly proposing EU-level support mechanisms for the time being, calling instead on Member States to take the lead, and especially those that are fossil fuel heavy:

> *Member States with fossil reserves and/or high shares of fossil fuels in their energy mix should support CCS through the pre-commercialisation stage in order to bring down costs and enable commercial deployment by the middle of the next decade. This must include the development of an adequate CO_2 storage and transport infrastructure that could benefit from EU funding such as the Connecting Europe Facility and any potential successor.*

The European Parliament's own draft report on the 2030 framework also includes strong wording on CCS. When this was voted through the joint ITRE/ENVI committee earlier in January it called on the Commission to 'propose appropriate measures within the 2030 framework in order to mobilise stakeholders and the necessary funding'. This Parliament report is due for plenary vote on 4 February.

Bellona thinks: Such acknowledgement by both the Commission and Parliament that CCS is central to decarbonizing Europe is welcome, but must now be followed up with concrete plans of action. The Parliament's CCS implementation report includes several such options to be thoroughly considered, including a comprehensive review of the CCS Directive and new funding mechanisms such as an "industrial innovation investment", another policy option mooted in the White Paper:

> *In line with the Union's innovation and industrial policies, the concept of an expanded NER300 system will, therefore, be explored as a means of directing revenues from the ETS towards the demonstration of innovative low carbon technologies in the industry and power generation sectors.*

It now falls to the Commission and Member States to decide whether this scheme can be made to drive CCS deployment in Europe, as well as whether other measures, such as a possible EU-wide CCS certificate scheme or CCS target, will make it into the final package to be launched in 2020. Bellona has worked to promote these policies over the past year. More information can be found in our CCS Market Incentives report (downloadable here) and the ZEP report on CCS in energy intensive industries (available here).

2. The proposed changes to the ETS leave much to be desired

A greenhouse gas emission reduction target of 40% by 2030 lies at the heart of the policy framework outlined in the 2030 White Paper. The Commission's own 2050 low carbon economy roadmap shows a 40-44% reduction will be necessary to be on track for an overall 2050 target of 79-82%, so the proposal falls at the very lowest end of its declared spectrum of ambition. This has led to concerns

that these reductions are incompatible with the EU's goal to limit global temperature increase to 2°C, which requires a reduction of close to 50% by 2030 in order to limit the risk to the planet.

Also proposed in the 2030 White Paper is the creation of a market stability reserve for the ETS - a sort of buffer stock of emissions allowances aimed at stabilising the CO_2 price. The ETS has so far not provided a strong and stable price for CO_2 emissions for a variety of reasons, the most recent of which being the sharp fall in economic activity caused by the financial crisis. This showed that unpredictable ebbs and flows in the broader economy may not correspond with the neat linear reduction profile of the ETS allowances year-on-year, leading to significant – if temporary – fluctuations in the price of CO_2 that diminish the investment signal to decarbonise.

The stability reserve laid out in the White Paper aims to put an end to these fluctuations, as well as any *ad hoc* legislative initiatives to stabilise the CO_2 price, such as the current "backloading" proposal. It would work by annually putting 12% of the total number of allowances in circulation[1] into a reserve if there are over 833 million allowances in circulation. A fixed number of 100 million allowances would then be automatically released into circulation under 2 conditions:

1) The total number of allowances in circulation is below 400 million;
2) The CO_2 price rises for a period of six months to more than three times the average price during the two preceding years.

However, there are two aspects of the scheme that may weaken it. The first is that the mechanism proposed would only start in 2021 – later than many stakeholders were hoping. According to the Commission, there are currently 2 billion allowances not needed for compliance – a surplus expected to persist for at least a decade, if not longer. This means that should the backloading initiative fail, the CO_2 price would continue to flounder for at least another 5 years until the market stability reserve began to work.

The second, and even more serious, problem is that the whole process is completely non-discretionary, rule-based and automatic. Because market actors can be absolutely certain that the allowances in the reserve *will* be released should the market tighten, the allowances held in the reserve will likely be 'priced in' to the CO_2 price in the long term, even though these allowances are not in circulation. The resulting CO_2 price with the stability reserve would therefore be little changed.

Bellona thinks: Previously, Bellona has argued strongly in favour of a *discretionary* price management reserve regulated by an independent 'bank' (read more here). Such a reform would allow the EU Institution with executive responsibility for the system to react to inherently unpredictable changes in carbon demand that could lead to excessive price movements affecting the orderly functioning of the market. It would also avoid the pitfalls described above by keeping market actors guessing about if and when allowances would be withdrawn or released from the market.

[1] The difference between the total number of allowances issued and verified emissions since 2008 factoring in international credits, as well as all the allowances already in the reserve.

The less ambitious CO_2 reduction target and 'paper tiger' stability mechanism will certainly not help accelerate the deployment of decarbonisation options that do not receive strong targeted support at the EU level – options such as CCS, the vast number of energy storage possibilities and other nascent technologies. The proposed ETS reforms therefore make the case for greater targeted support to ensure these technologies of a level playing field.

Moreover, by opting for the least ambitious 2030 CO_2 reduction target possible, the Commission has also chosen a 'walk now, run later' approach to decarbonisation, making it increasingly important that carbon negative technologies are also now supported. In this regard, the ETS needs to be adapted to acknowledge and reward emissions below zero as part for the 2030 framework. CCS in combination with biomass is the only way to attain negative CO_2 emissions on a large scale, i.e. removing CO2 from the atmosphere over time.

3. Renewable energy target

In the 2030 White Paper the Commission proposes a binding target of a 27% share of renewable energy consumed for the whole of the EU. This is a disappointing level of commitment that does not match the ambition of the previous 2020 target for renewables deployment.

The proposal claims to be "building on the momentum behind the development of renewables", whereas in reality it is backing off from prior statements that renewables are the future of Europe and a safe investment backed up by EU policy.

There have also been serious questions raised about how binding the target actually is. In fact, as the White Paper says:

> *While binding on the EU, it would not be binding on the Member States individually.*

Even though the Commission suggests the overall target "would be fulfilled through clear commitments decided by the Member States themselves" it is highly unclear how that would happen. EU legislation would grant flexibility to Member States, which should be "guided by the need to deliver collectively the EU-level target." The legislation leaves in question how countries such as Poland or the UK, who are overly negative towards the EU's climate policy, would deal with such flexibility and the lack of imposed goals.

The White Paper also states that:

> *The 2030 policy framework should be based on full implementation of the 20/20/20 targets and […] an ambitious commitment to reduce greenhouse gas emissions in line with the 2050 roadmaps.*

It should, however, be underlined that some Member States will already reach the target of 27% RES in 2020.

Bellona thinks: As much as the argument that "meeting MS' greenhouse gas reduction targets in the most cost-effective manner in accordance with their specific circumstances, energy mixes and capacities to produce renewable energy" sounds plausible, it in truth leaves Member States with no actual targets to reach for 2030. This is further magnified by the quite blurry statement that further EU action and instruments would be developed to ensure delivery of the overall EU target.

The proposed target of 27% is far too low to maintain RES investment certainty and not ambitious enough to stay on a path leading to global mean temperature change of less than 2°C. Bellona strongly supports a higher target and hopes that the legislative process will bring such a stronger result.

4. Bioenergy in 2030 framework

About 50% of the EU's renewable energy toward 2020 comes from bioenergy; from biomass for heat and power and from biofuels for transport. The binding EU 2020 target of 20% renewables has largely provided the impetus for this result. But EU policy in this area has also seen a protracted debate, in particular on indirect land use change (ILUC).

The 2030 White Paper includes an EU wide target of 27% renewables, but does not specify the role of bioenergy within this mix, nor does it offer specific sub-sector targets, for instance for the transport sector which for 2020 has a 10% renewables target. The 2030 White Paper acknowledges that first generation biofuels (those that are food-based and most prone to ILUC issues) will have "a limited role in decarbonizing the transport sector". It also cites earlier indications that such food-based biofuels will not receive public support after 2020.

Bellona thinks: Industry representatives have commented that a lack of specific targets deals a blow to investor security. But a lack of targets also circumvents the contentious issues, such as how to account for ILUC and whether or not to 'cap' the level of first generation biofuels within the 10% target, which have also caused insecurity by stalling policy progress. Protracted debate appears to have led the Commission to circumvent rather than attempt to address this tangled web – and this may not be all bad.

While wide agreement and solid progress would indeed be preferable to circumvention, the 2030 White Paper signals the Commission's wish to move on. It recognizes that second and third generation biofuels should be the focus of policy and development. Because these 'advanced' biofuels are made from non-food products such as lignocellulosic biomass, woody crops, agricultural residues and algae, they are less prone to ILUC and should represent the future of EU bioenergy – along with solid sustainability criteria.

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Sustainable bioenergy will remain one of the best options forward for a low carbon Europe. In combination with CO_2 capture and storage (CCS) biomass can attain negative CO_2 emissions, whereby CO_2 is removed from the atmosphere over time and stored. The White Paper says that "the functioning of the ETS and the contribution to GHG reductions from renewables are closely interlinked and complementary". Any EU climate and energy framework therefore also needs an EU ETS which rewards such negative emissions.

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