European Parliament Policy Event

'Enhancing the EU's industrial competitiveness through the EU ETS innovation fund'

- Meeting Report -

25th May 2016

Carbon Market Watch organized a debate in the European Parliament on Wednesday 25th 2016 kindly co-hosted by MEPs Jo Leinen (S&D) and Gerben Jan-Gerbrandy (ALDE), with a reaction from Fredrick Federley (ALDE).

The event focused on the potential for heavy industry to decarbonise by over 80% through innovative technologies, processes, and developments, and how the path to a low-carbon economy can also drive up European competitiveness. Furthermore, the event focused on the potential for the EU ETS to provide much needed funding to drive forward innovation in Europe through the EU Innovation Fund.

This event has, in light of the ongoing negotiations on the EU ETS reform proposal, contributed towards shifting the debate towards strengthening the EU ETS so it can properly function as a mechanism for reducing CO_2 while driving much needed investment into innovation and the transition towards a low-carbon economy in Europe.

The event coincided with the release of a study by Tomas Wyns and Matilda Axelsson entitled 'Decarbonising Europe's energy intensive industries: The Final Frontier' and an accompanying policy brief.

The full event can be viewed via web stream. To watch the video, please click here.

Below is a short summary of the presentations and discussion:

Tomas Wyns (Institute for European Studies) presented the findings of a new report entitled "Decarbonising Europe's Energy Intensive Industries: The Final Frontier". **Key highlights from the Final Frontier Report and Tomas' presentation can be summarised as follows:**

- It is possible for industry to decarbonise by 80% while maintaining their competitiveness and it is important that "solutions allow for higher levels of competitiveness for these industries".
- Public policy has "an important role" – "Europe and it's Member States should form a long-term and cohesive vision on a competitive future of EU energy intensive industry and that includes their decarbonisation".
- Industries in Europe are capable of reducing their emissions by as much as 80% while maintaining, and in many case improving, their economic competitiveness. Examples of options include:

  Changing from petroleum based inputs to bio-waste feedstock can eliminate most direct emissions in the petrochemical sector. Large decarbonisation has already happened in the petrochemical industry. More decarbonisation can occur through a move "away from petrochemicals based chemicals towards bio-based chemicals" allowing emission reductions of up to 50%.
  - Reducing the use of fertilisers while keeping the same crop yields through new agro-technologies such as targeted micro dosing of fertilisers and direct nitrogen fixation (allowing plants to obtain nitrogen directly from the atmosphere).
  - Reducing the amount of concrete or cement needed through advanced material science will have a direct impact on the total emissions of the cement sector.
  - The 16 million tonnes of scrap steel that the EU exports each year can be reused and up-cycled here in Europe via Electric Arc Furnaces resulting in less CO_2, less energy and lower costs.
- A significant challenge of the industrial low-carbon transition is how to bring these technologies to the commercialisation stage.
- The Innovation Fund, proposed under the EU ETS, can be a key source of financing for the commercialisation of necessary, innovative technologies and processes to further decarbonisation in Europe.

Dr. André Serrenho (Cambridge University) presented the research he conducts with Dr. Julian Allwood that looks at the possibilities for reducing the material use of heavy industry in Europe in an effort to increase competiveness and decarbonisation simultaneously. The main points of his presentation can be summarised as follows:

- Promoting the idea of efficient usage of materials, Dr. Serrenho emphasised, in the steel industry, the necessity to "make it lighter, keep it longer, use it more".
- In many industries the levels of wastage are enormous and there is large scope for the reusage, diversion, and avoidance of scrap altogether. This is particularly applicable to the steel industry.
- As Scrap availability is set to treble by 2050 there should, technically, be no reason why we will ever need to build new blast furnaces.
- **Innovation should focus downstream**, where most added value and jobs can be created.
- Innovation support is required to **reduce contaminants** in end-of-life scrap.

Martin Pei (Chief Technical Officer for SSAB) presented the SSAB project for hydrogen based $C0_2$ free iron-making where the main by-product of ironmaking would be water rather than CO_2. The main points of his presentation can be summarised as follows:

- SSAB has one of the most CO_2-efficient ironmaking processes in the world today, but is still the largest source of CO_2 emissions in Sweden, making the need for low-carbon technologies extremely important.
- Conditions for a green industrial research program to enable test facilities for hydrogen gas-based ironmaking necessary to promote innovative breakthrough technologies.
- Long term engagement from the state is needed in all phases of development work, as well as in enabling competitive conditions and labor policy during the time period.
- Martin Pei concluding by saying it is essential to "ensure competitive conditions in emission trading system to enable investments in long term innovation".

Donal O'Riain (founder of Ecocem) introduced the work of his innovative and low-carbon cement company that is attempting to garner a greater market share in the cement industry by offering a decarbonised alternative to traditional cement. The main points of his presentation can be summarised as follows:

- Donal opened by "fully endorsing" the findings of the Final Frontier report in relation to the cement industry, stating that "innovation is absolutely fundamental…the cement industry cannot look anything like it does today by 2050 if it is to be a low-carbon industry, meaning radical industrial transformation has to take place."
- The Emissions Trading System is giving the cement industry a "25 year time out before it needs to confront its need for radical decarbonisation". "The flooding of the sector with excess permits is giving the sector enough permits to continue with business as usual until 2030."
- Ecocem uses an old technology in the cement industry to make a more environmentally sound cement that has a carbon footprint $1/40^{th}$ of conventional cement. However, the EU ETS perversely rewards Ecocem's competitors for this through the over-allocation of free emission allowances, which benefits the polluting sections of the sector rather than the frontrunners who are decarbonising.

Peter Blezard (CEO of Azotic Technologies) summarised the key developments in his company's new delivery system for nitrogen call N-Fix technology. The main points of his presentation can be summarised as follows:

- The overuse of nitrogen fertilisers on crops causes nitrate pollution which has led to excessive greenhouse gas emissions, ecological dead zones, and widespread water contamination.
- The technology *Gluconacetobacter diazotrophicus* (Gd), originally developed by Professor Ted Cocking FRS, is a patented disruptive technology that enables naturally sustainable farming without nitrogen pollution. Simply, it allows plants to take nitrogen from the air without the need for synthetic nitrogen.
- The N-fix technology allows for increased profit for farmers through reduced fertiliser usage and increased yields while reducing greenhouse gas emissions from agriculture.

Femke de Jong (EU Policy Director at Carbon Market Watch) presented the case for EU ETS reform to support the low-carbon transition of industry through innovation. The main points of her presentation can be summarised as follows:

- Without a change of the rules, the European Environment Agency (EEA, 2015) projects that **industry's emission reductions will stall over the next 15 years.**
- The EC's 2050 low-carbon roadmap: **83-87%** emission reductions in industry (compared to 1990) needed to reach domestic economy-wide reductions of 80% by 2050
- Challenges of climate change are also an opportunity to focus on climate-friendly solutions with co-benefits that increase the economic performance of industries and reduce the reliance on imports.
- **Necessary to set a stronger carbon price signal** by cancelling surplus emission allowances, introducing a steeper decarbonisation pathway (LRF>2.8%) and starting in 2021 at actual emission levels.
- **Introduce an incentive to innovate** by annually reducing the amount of free allowances that an installation receives (the benchmark) in line with the overall decarbonisation pathway of the EU ETS.

Closing Q&A Session

- Reaction from **Fredrick Federley** (ALDE) opened the Q&A session and covered the EU climate policies. He highlighted the international dynamic to regional policies and the necessity to push innovation to recognise this paradigm through the EU ETS Innovation Fund.
- A wide range of questions were presented from industry representatives and NGOs alike, demonstrating the keen attention paid to the upcoming EU ETS reforms and also the prospects for industrial innovation in the EU.
- Many of the questions from the audience were on the cement industry and the potential reforms of the EU ETS to confront the problems with introducing innovation into the sector.
- Gerben Jan-Gerbrandy closed the event by saying "let's not try to find ways to not reduce emissions but instead try to find ways to make really huge breakthroughs".