

Effective Transition Signals

*Position paper of the
European Wind Energy Industry
on the ETS post-2020 revision*

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EWEA
THE EUROPEAN WIND ENERGY ASSOCIATION

The role of wind power in Europe's energy transition

Wind energy plays a key role in meeting Europe's objectives of economic growth, affordable energy, decarbonisation, competitiveness and energy security.

The wind energy capacity currently installed in the EU would produce in an average wind year 284 TWh of electricity, enough to cover 10.2% of the EU's total electricity consumption. Wind power was the generating technology with the highest rate for new installations in 2014, accounting for 43.7% of total 2014 power capacity installations, 12 percentage points higher than during the previous year.

This trend displays that wind energy is no longer a niche technology as it is gradually establishing itself as an important industrial sector by providing a key solution to EU member states for the transition to a decarbonised power sector.

According to the Commission's Energy roadmap, if Europe is to meet its long-term decarbonisation goals, wind energy will be the leading power source in 2050 (between 33 and 49%).

EWEA's new Central Scenario expects 320 GW of wind energy capacity to be installed in the EU in 2030, 254 GW of onshore wind and 66 GW of offshore wind. That would be more than twice as much as the installed capacity in 2014 (129 GW) and an increase of two thirds from the expected capacity installed in 2020 (192 GW).

By 2030, wind energy will produce 759 TWh of electricity, equal to 23% of the EU's electricity demand. The wind energy industry will provide over 334,000 direct and indirect jobs in the EU and wind energy installations in 2030 will be worth €474 bn. The 96,000 wind turbines installed on land and in the sea will avoid the emission of 436 million of tonnes (Mt) of CO₂.

Wind energy's potential to 2030 will depend to a large extent on recent policy developments in the major EU climate and energy priorities: the governance of the Energy Union, a new European power market design and reform of the Emission Trading System.

Introduction

European policy makers face a formidable set of challenges to decarbonise Europe's economy and overhaul its ageing fossil power system. In a context of increasing global action to mitigate climate change, the EU needs to design the right policies to deepen its emissions reductions and achieve the 2050 decarbonisation objectives.

The ETS has the potential to be an important piece in the energy transition puzzle. By factoring in the carbon externalities of fossil fuels, it has the ability to reflect the true cost of technologies and create a level-playing field for all energy sources. As a truly European instrument, it could ensure that decarbonisation incentives are present in all EU member states.

In this position paper, EWEA lays out its views on how the ETS can stimulate a high and stable carbon price and how its tools can drive fossil fuel-dependent Member States toward decarbonised and renewable energy portfolios.

Effective transition signals

A well-functioning ETS would create effective transition signals that enable Europe's power sector to phase out carbon-intensive generation capacity and move towards a power mix with larger shares of renewables renewable energy supply. This would be triggered by long-term price signals that impact investment decisions and operating price signals that have an impact on the merit order of the wholesale power market - by pricing the externality of emitting CO₂ per unit of power produced.

However, ten years of emissions trading in the EU has provided an important lesson: the system as it currently functions is unable to form the centerpiece of Europe's climate & energy legislation. With the persisting ineffective carbon price levels, the system will merely function as a pollution tax at best.

Due to the lack of a meaningful carbon price, the ETS has not been able to deliver strong incentives to switch from high carbon assets to clean energy production. In contrast, it is giving coal and gas a comparative advantage over generation technologies with no emissions such as wind energy, as they do not pay for the costs they impose on society.

Root and branch reform

In October 2014, heads of state and government agreed on new headline targets for the EU's framework on climate and energy for 2030, including a domestic cut in greenhouse gas emissions of at least 40% by 2030 compared to 1990 levels. To achieve this EU target, the sectors covered by the ETS will have to reduce their emissions by 43% compared to 2005.

In order to reach this target, the European Commission has proposed to increase the linear reduction factor, which determines the pace of emission reductions, from 1.74% to 2.2% from 2021 onwards. The annual decline of the number of emission allowances would result in a reduction of some 556 million tonnes in the next decade. Greenhouse gas reductions need to be made within Europe, as installations are not allowed to offset their emissions with international credits after 2020

The European Commission's legislative proposal for the post-2020 revision of the ETS provides an opportunity to conduct a root and branch reform and realign it with Europe's political ambition on climate change. A substantial reform and the creation of a trajectory towards robust and high carbon prices need to turn the ETS into an effective instrument that supports the drive towards renewable energy generation.

1. Restoring market balance and ambition

Ten years after its launch, the ETS continues to suffer from a surplus of allowances that is depressing carbon prices. Restoring market balance is a prerequisite to provide investors with a meaningful carbon price signal.

Proposals to tackle the surplus resulted in political compromises that delivered modest changes, rather than a serious and structural overhaul of the carbon market. The introduction of the market stability reserve in 2019 is a step in the right direction, but this measure alone will prove insufficient to restore market balance.

The carbon market is expected to remain oversupplied until at least 2025. Even in combination with the post-2020 linear reduction factor, the market stability reserve is not capable of creating genuine scarcity.¹ The carbon price would thus continue to have little impact on investment decisions for a further 10 years, thereby locking Europe into high-carbon energy systems and infrastructure.

Creating a more robust carbon price is key to create effective transition signals in the short and medium term. EWEA therefore calls for a number of changes to the Commission proposal to restore market balance and allow the ETS to get back on track when its next trading phase starts in 2021.

Bring ETS cap in line with reality

Weaker demand for ETS allowances, in particular in the power sector, will result in additional surpluses in the future as the level of ambition in the ETS does not reflect the emissions reductions realised in reality.

For many years, the level of emissions reductions in the EU has been outpacing the annual emission allowances decline rate. Emissions in the ETS sectors decreased by 4.5% in 2014, 3% in 2013 and 2% in 2012. This is considerably more than the current linear reduction factor of 1.74%.

To align the ETS with the pace of emissions reductions realised in the current trading period and to reinforce market balance and the effectiveness of the system, the overhang of allowances needs to be curtailed through different means.

Preserve integrity of the 40% GHG target

Carrying over allowances that are left over in the current trading period (2013-2020) to the following trading period (2021-2030) undermines the integrity of the 40% GHG target. In view of renewing the reserve for new entrants and growing installations, the Commission has proposed that unallocated allowances that are left over in the current trading phase will be carried over to the next trading phase.

The transfer of these 450 million allowances from trading phase 3 to trading phase 4 weakens the ambition of the 40% GHG target. It is a step backwards from the political agreement on the ETS market stability reserve, which had foreseen a transfer of unallocated allowances to the reserve. The additional abatement created by the increased linear reduction factor, namely 556 million tonnes, is to a large extent neutralised by carrying over 450 million allowances from a previous trading period.

To preserve the integrity of the 40% GHG target and to maintain confidence in the market stability reserve, the reserve for new entrants and growing industries, as well as any other instruments, should be supplied with allowances from the trading period in which the instrument operates. Allowances that sit in the market stability reserve should not be used for political purposes such as compensation for certain industry sectors.

¹ Thomson Reuters Point Carbon, What's next? Political processes and price outlook, June 2015.

Align national ambition with the ETS

Supplementary measures implemented by some member states drive additional domestic emissions reductions, but at the same time increase the share of carbon allowances available to plants elsewhere in the EU, probably at a lower cost.

As a consequence of weak ETS price signals, some EU member states have implemented supplementary national measures to realise deeper emission cuts. For example, the UK set-up a carbon tax which currently brings the costs for emitting a tonne of carbon for British power plants to 33 Euro, with the ETS price factored in. As part of its national energy agreement, the Dutch government proposed an efficiency standard which will lead to the phase-out of five coal-fired power plants in the Netherlands by 2017.

These unilateral measures effectively reduce power generation from the most CO₂-intensive units and encourage manufacturers to switch to a larger portfolio of renewable power generation. By aligning national actions with the overall market balance, their efforts would be better reflected in the functioning of the European carbon market.

While efforts by member states to increase environmental ambition and phase out the most polluting power assets are welcome, they should be factored into the ETS. Aligning ambitious national abatement measures with the ETS could be done through the creation of national registries to set-aside a number of auctionable allowances equivalent to the additional emissions reduced.

Ratchet up ambition

The proposed ETS framework for the 2021-2030 period lacks a review clause that can ratchet up ambition and bring the system in line with a new international climate architecture.

The EU's Intended Nationally Determined Contribution (INDC), as submitted to the UNFCCC in light of the Paris climate talks, states that it wishes to discuss with other countries ways to collectively increase ambition towards the two-degrees goal. In this context, the EU has endorsed the idea of five-year reviews that would provide for a process in which progress is tracked and ambition can be raised.

Accordingly, an updated and enhanced review clause should set out how the EU can increase its 2030 pledge in light of an ambitious global deal and actions taken by other industrialised nations.

A provision to review and adopt a steeper GHG emissions reductions trajectory needs to be included in the ETS 2021-2030 framework to synchronise the system with the UN climate architecture and to allow it to respond to political, technological and economic changes.

2. Robust solidarity mechanisms

The ETS offers 10 lower income member states two different solidarity mechanisms as additional support to help them meeting the high investment needs related to clean power generation and the modernisation of their energy systems. Through the so-called article 10c derogation, utilities in these member states will benefit from an exemption to the full auctioning principle, and are required to invest in the modernisation of their power fleet in return. In addition, a new modernisation fund of 310 million allowances will be set up to give financial support and facilitate investments in the modernisation of energy systems.

These solidarity mechanisms need to offer concrete opportunities to member states to replace ageing infrastructure and high-fossil power generation. The current solidarity mechanisms had little positive impact on the energy systems of these member states and, therefore, additional scrutiny is required to make them effective.

Projects in line with 2030 energy & climate framework

The solidarity mechanisms currently in place include loopholes and loose criteria that allow member states to effectively subsidise their coal industry, thereby locking-in polluting fossil assets and infrastructure.

Robust and solid criteria need to be applied to the investments made under both the modernisation fund and the article 10c derogation. By prioritising the upgrade of electricity infrastructure and deployment of renewable energy, the solidarity mechanisms are able to help member states contribute to the achievement of the EU 2030 climate and energy goals.

The criteria for investments made under the modernisation fund and the article 10c derogation should be in line with the EIB's energy lending criteria, including its emissions performance standard, thereby guaranteeing the sustainable and economic justification of the projects.

An ex-ante assessment of the projects should be introduced in the Energy Union governance system to link the use of the funds to the Commission's policy recommendations. The granting of modernisation funds and the free allocation derogation would be conditional and steer member states towards modernising and decarbonising their power systems.

Leading role for European Investment Bank

An investment board, consisting of representatives from Member States, the European Investment Bank (EIB) and the Commission will be involved in the selection of projects under the modernisation fund, which could invest as much as 8 billion Euro in the 2021-2030 period.

Increase the role of the EIB in the selection of all projects, not only those above a certain threshold, in order to have a more transparent and impartial oversight, while making the Commission responsible for an effective scrutiny of investments.

Apply full auctioning to power sector

The article 10c derogation is distorting competition in the internal energy market and has a negative impact on the incentives to reduce emissions.

If the investments made under this mechanism do not help the transition of the relevant national power sectors, there is a clear risk of the 10C derogation being extended again beyond 2030.

The article 10c derogation should be phased out and its distortion on competition in the internal energy market minimised. While working towards a full auctioning of emission allowances in the power sector, the projects financed by this mechanism should exclude refurbishment of coal and lignite and be in line with the investment and finance criteria of the modernisation fund.

3. Boosting Europe's industrial base

To become the world's number one in renewable energy technologies, it is vital for the EU and its member states to bolster leading technologies in Europe's renewable energy industry through strong industrial and innovation policies. As the replacement of the NER300 program, the Innovation Fund will be key in financing and enabling innovative technologies to progress towards commercialisation by monetising 450 million allowances, possibly worth 9-11 billion Euros.

As a mainstream, competitive and clean form of power generation, wind energy technology is key to contribute to the EU's climate and energy objectives. Wind energy will be the key technology delivering renewable electricity and is expected to grow from 129 GW today to 191 GW in 2020 and 320 GW in 2030. The 2014 Commission impact assessment of the 2030 climate and energy package revealed that wind energy creates more jobs than any other energy technology per MW installed, per MWh produced and per Euro invested.

The Innovation Fund should continue the success of the NER300 program by supporting large-scale commercial demonstration projects that can turn innovative renewable energy technologies into mature products. This will help Europe meet its renewable energy target cost-efficiently and contribute to the competitiveness of its industrial base.

Supporting game-changing renewable energy technologies

Wind energy projects that are currently running under the NER300 program have proved to leverage significant amounts of private sector investments and bring game-changing technologies to the market. This contributes to the EU's long-term goal of decarbonising its power sector cost-effectively.

Although the scope of the Innovation Fund is extended, it needs to remain limited to technologies that are not yet commercially available but sufficiently mature to be ready for demonstration at pre-commercial scale.

The Innovation Fund should build on the existing NER300 framework by applying similar criteria and technology requirements to all projects that apply for funding and give preference to those that have a good chance of successful demonstration and limited challenges associated with scaling up.

To maximise the Innovation Fund's impact on Europe's industrial competitiveness, it should focus on those technologies that have a high replicability potential, and therefore offer significant prospects for cost-effective CO2 reductions in the EU and elsewhere in the world.

To ensure a maximum cost effectiveness of the NER 400, it should be considered how the development, demonstration and deployment of individual components and systems, which are integral parts of a demonstration plant, can be supported

Innovative financing instruments and project categories

Experience from the current NER300 program has shown that some technical adjustments to the Innovation Funds modalities should be envisaged as certain innovation sub-categories did not receive viable project proposals. In addition, the lack of upfront financing slowed progress in the early stages of a number of projects.

A continuous dialogue with the industry should enable the Commission to keep its list of sub-categories relevant and make appropriate mid-term technical adjustments when a sub-category has repeatedly failed to attract sufficient interest.

As upfront financing is beneficial for projects at an early development phase, the option of grant based mechanisms needs to be enhanced to improve the financial position of a project, thereby attracting more investors and leveraging more private sector investments.