Setting the course towards climate neutrality

WindEurope position on the ‘Fit for 55’ package

MARCH 2021
EXECUTIVE SUMMARY

This paper sets out WindEurope’s priorities for the EU’s ‘Fit for 55’ legislative package.

The European Green Deal requires an acceleration of the rate of expansion of onshore and offshore wind. A 25-fold increase in offshore wind capacity and an even bigger increase in GW in onshore wind capacity.

Member States have now agreed to ratchet up the EU 2030 greenhouse gas emission target from 40% to at least 55% to deliver the Green Deal. This will trigger an upward revision of the EU’s 2030 renewable energy target from 32% today to 38%-40% according to the European Commission’s Impact Assessment.

This means the EU wind energy capacity would need to be 433-452 GW by 2030 (361-374 GW onshore and 73-79 GW offshore) for 38% and 40% targets respectively. This is almost a threefold increase on the 179 GW installed today. And 90 GW more than what EU-27 pledged in their 2030 National Energy & Climate Plans.

The EU built 10.5 GW of new wind energy capacity in 2020 and is expected to install 15 GW per year in the period 2021-2025. The EU needs to build 18 GW per year over 2021-30 to deliver the existing 2030 EU renewable energy target and 27 GW per year to deliver the higher target foreseen by a 55% greenhouse gas emission reduction by 2030.

The benefits of an accelerated buildout will be significant. The EU wind energy sector supports 300,000 jobs, generates €37bn to EU GDP and €5bn in local taxes pa. It operates 248 factories across the EU. Each new wind turbine installed in Europe contributes €10m of economic activity. Onshore and offshore wind are the most cost-competitive sources of new power generation in most of Europe.

But current policies will not deliver these numbers – neither on volumes, nor on economic benefits. Higher targets are necessary but not sufficient. Europe needs stronger delivery, monitoring, and enforcement measures to ensure 2030 is a steppingstone towards a climate neutral energy system.

The ‘Fit for 55’ package must address remaining bottlenecks to the cost-effective delivery of the EU’s Climate & Energy targets across EU legislation. And maximise the benefits that a competitive European wind supply chain can deliver for the green and digital transition of all Europeans. This paper focuses on the three critical files underpinning wind energy expansion: the recast Renewable Energy Directive, the EU Emissions Trading System, and the new Carbon Border Adjustment Mechanism.

Policy Recommendations

The revised Renewable Energy Directive should:

- Add a non-binding Annex on benchmarks for good practices in permitting to Article 16;
- Revise Guarantees of Origin rules to accelerate renewable electricity uptake in Article 19;
- Include definitions for renewable hydrogen, hybrid renewable energy power plants, and offshore hybrids in Article 2;
- Set a 2030 target of at least 38%-40% of renewable energy in final energy consumption in Article 3.

The revised EU Emissions Trading System should:

- Adapt the emissions cap to bring the ETS in line with the 55% GHG emission reductions target through a combination of rebasing and an increase in the Linear Reduction Factor;
- Maintain the intake rate of the Market Stability Reserve at 24% after 2023;
- Expand to the intra-EU maritime sector;
- Set a level-playing field in the allocation of free allowances to fossil-based and renewable hydrogen.

The new Carbon Border Adjustment Mechanism should:

- Ensure uninterrupted access to global supply chains of raw materials;
- Keep wind turbine exports competitive within and outside the EU;
- Not undermine EU internal power market reforms and electricity price formulation; and
- Be a tool of, and not an obstacle to, EU climate diplomacy.
The revised Renewable Energy Directive should:

- Add a non-binding Annex on benchmarks for good practices in permitting to Article 16;
- Revise Guarantees of Origin rules to enhance traceability and facilitate the uptake of corporate renewable Power Purchase Agreements in Article 19;
- Include definitions for renewable hydrogen, hybrid renewable energy power plants, and offshore hybrids in Article 2;
- Include a certification system for renewable hydrogen reflecting Article 19.7;
- Set a 2030 target of at least 38%-40% of renewable energy in final energy consumption in Article 3.

The 2018 Renewable Energy Directive is the key EU legislative instrument to unlock the wind energy volumes spelled out in the 2030 National Plans and to deliver on the EU 2030 renewable energy target. The Directive sets the regulatory framework for wind energy with clear requirements to Members States on timeline, volumes and budget for the pipeline of renewable energy installations; simplified permitting for new and repowered installations; and design of support schemes. A number of provisions in the Directive need to be strengthened if Europe is to increase the pace of wind buildout necessary to deliver climate neutrality by 2050.

Permitting (Article 16)

Member States have now agreed to ratchet up the EU 2030 greenhouse gas emission target from 40% to at least 55% to deliver the Green Deal. This will trigger an upward revision of the EU’s 2030 renewable energy target from 32% today to 38%-40% according to the European Commission’s Impact Assessment.

This means that the EU wind energy capacity needs to be 433-452 GW by 2030 (361-374 GW onshore and 73-79 GW offshore) for a 38% and 40% renewable energy targets respectively. This is almost a threefold increase on the 179 GW installed today. And 90 GW more than what EU-27 pledged in their 2030 National Energy & Climate Plans.

The EU only built 10.5 GW of new wind energy capacity in 2020 and is expected to install 15 GW per year in the period 2021-2025. This is not enough. The EU needs to build 18 GW per year over 2021-30 just to deliver the existing 2030 EU renewable energy target. And 27 GW per year to deliver the higher target that is now coming with the 55% climate target.

The problem for buildout is not technology, finance or costs. It is permitting. Europe is simply not permitting enough new wind farms to meet its renewable energy targets. Raising the EU 2030 renewable energy target is academic if we do not address the permitting bottlenecks.

It is too difficult to get permits for new and repowered wind farms in Europe today because:

- **Rules are complex.** There are more and more spatial planning constraints e.g. minimum distance to housing, tip/hub height restrictions, exclusion zones around radar installations or in Natura 2000 sites;
- **Procedures are slow.** There are too many administrative authorities involved: at national, regional, municipal level. Most EU countries still don’t have a single contact point (i.e. one-stop-shop) to expedite the permitting process. And legal challenges add months of delays;
- **Permitting authorities aren’t adequately staffed.** Authorities at all levels lack sufficient digital and/or human resources to process a growing number of permitting applications; and
- **National Maritime Spatial Plans don’t factor in the needed uptake of offshore wind.** Current National Plans may not deliver the sites Europe needs to deploy 300 GW of offshore wind by 2050. National Plans don’t fully mainstream long-term climate and energy objectives nor do they fully leverage multiple-use of
the sea space to ensure coexistence of offshore wind with other users of the sea e.g. shipping, fishing, military.

This means that many projects do not go ahead and permitting costs add to development costs and risk which deters investors from developing projects. So there are not enough projects to meet Europe’s climate and energy targets.

And there are wider economic consequences. Wind energy in Europe is 300,000 jobs, 248 factories, €37bn GDP contribution, global technology leadership. Retaining this, let alone increasing it, needs a healthy project pipeline.

Article 16 of the Renewable Energy Directive requires Member States to permit new renewable energy installations within 3 years and repowered ones within 2 years. And the Governance Regulation requires Member States to outline concrete measures they will take to ease permitting. Only 4 Member States (PT, FR, DK, ES) improved their approach to permitting in their National Energy and Climate Plans. The rest of the Plans are silent on the simplification of permitting.

Neither the Renewable Energy Directive nor the Governance Regulation guide Member States on how they should simplify permitting.

The Commission should support the further implementation of simpler and faster permitting rules and procedures in the Renewable Energy Directive by complementing Article 16 with a non-binding annex setting out benchmarks for good practices on permitting. These benchmarks could include for instance:

1. Number of staff in authorities to assess permits.
2. Number of authorities involved in the whole permitting process.
3. Approval rate of permits per country/region.
4. Proportion of permits faced with legally challenges per country/region.
5. Proportion of legal challenges that are overruled per country/region.
6. Average response time of authorities/TSOs/DSOs.

The non-binding annex with benchmarks will support National Governments in identifying and addressing specific challenges in their approach to permitting as compared to other Member States. And would support them in the delivery of the 2030 National Energy & Climate Plans.

 Guarantees of Origin (Article 19, Article 15.8)

Guarantees of Origin (GOs) are key to track the consumption of renewable electricity. A well-functioning framework for GOs will unlock the full potential of corporate renewable Power Purchase Agreements (PPAs) in Europe to contribute to the achievement of higher EU Climate & Energy goals.

Corporate renewable PPAs are a key driver for market-based investments in new renewable installations in Europe. They help minimise financing costs for capital-intensive wind energy projects by complementing market-based public support and providing renewable electricity suppliers with stable and secure revenues. This in turn helps deploy wind energy at the lowest cost for society.

In 2020 nearly 4 gigawatts (GW) of capacity was contracted with corporate renewable power purchase agreements (PPAs) across 12 countries, with Spain leading the pack with more than 1.3 GW announced.

Europe now has 12.1 GW of cumulative contracted volume of PPAs, up from 2.2 GW in 2016. More corporate and industrial buyers are engaging in reducing carbon emissions with renewable electricity. But buyers are also increasingly seeking more information on the origin of their power supply.
Therefore, Europe needs clear rules on traceability and should ensure GOs are issued to all renewable electricity producers with a consistent approach across all Members States and in interconnected third countries that are part of the Continental Synchronous Area.

All Member States should issue GOs to all renewable electricity producers, irrespective of whether the renewable energy project receive Government support. Where Government support is allocated in a competitive auction, the value of the guarantee of origin is *de facto* included in the bid, thereby addressing any concern related to overcompensation.

The current formulation of Article 19 allows Member States to retain GOs from renewable energy projects benefitting from State aid (e.g. Spain, France and Germany). This breaks the link between renewable energy producers and consumers and prevents PPAs from being signed. Article 19 needs to be clarified to ensure a harmonised approach across Member States on the issuance, use/cancellation of GOs for all renewable electricity producers.

The information related to the time of generation of the GO is currently provided on an annual or monthly basis. The Commission should explore adapting the GO system to a finer temporal granularity to support corporate consumers in the matching of supply and demand. The GO system should be underpinned by state-of-the-art technology to ensure the highest efficiency possible.

Article 15.8 of the Renewable Energy Directive requires Member States to remove all barriers to support the market uptake of corporate renewable PPAs. However, most Member States have largely ignored this requirement. 19 out of the 27 National Energy & Climate Plans do not include any evaluation of the current barriers to corporate renewable PPAs nor do they propose dedicated measures to facilitate their uptake.

**Article 15.8 needs to be fully enacted by Member States.** This will ensure corporate buyers and sellers have a fit-for-purpose framework for the development of corporate renewable PPAs. In addition to addressing the main current bottleneck – the retention by National Government of GOs for renewable electricity benefiting from support - the European Commission should share best practices from more ambitious Members States having taken concrete measures to promote corporate renewable PPAs. And the European Commission should partner with the EIB to set up a de-risking facility for corporate Power Purchase Agreements.

**Electrification (Articles 15, 23, 24, 25, 27)**

The revised Directive should reinforce the case for renewable-based direct electrification as the primary driver of Europe’s decarbonisation. Today electricity covers only 24% of the final energy uses and most of it comes from fossil fuels. Only 32% is provided by renewables in the EU-27.

Replacing fossil fuels with renewable electricity is the most cost-effective and energy efficient way of reducing CO2 emissions in sectors such as light transport, heating and cooling, and most of industry. Adopting policies that support an active demand for renewable energy from the consumption side will be also crucial to ensure the targets are reached.

The European Energy System Integration Strategy sets a clear course for direct electrification using renewable electricity wherever it is available and whenever it is possible. WindEurope’s assessment shows that it is technically and economically possible to achieve 62% direct electrification by 2050. This will deliver the bulk of decarbonisation of the economy:

- Heating and cooling could reach a 64% direct electrification rate by 2050;
- Transport could reach a 51% direct electrification rate by 2050;
- Industrial processes could reach an 86% direct electrification rate by 2050.

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1 Please refer to *Wind-to-X* (position paper), WindEurope, 2019
The regulatory work on direct electrification must accelerate. And many regulatory barriers still exist. Further specific measures for electrification are needed e.g. incentives for the widespread use of heat pumps and for integrating electricity into transport.

**Indirect electrification with renewables** will play a crucial role in the hard-to-abate economic sectors such as cement, steel, heavy-duty road transport, aviation and shipping. Renewable hydrogen (i.e. electrolysed hydrogen powered by 100% renewable electricity) helps decarbonise these sectors.

The European Commission’s Hydrogen strategy (July 2020) states that renewable hydrogen produced via electrolysis based on 100% renewable electricity is the hydrogen type most compatible with EU’s climate neutrality goal. The Renewable Energy Directive should serve to ramp up the production of renewable hydrogen towards competitiveness in this decade.

The first step to that end is for the Renewable Energy Directive to set a **clear, consistent, and transparent European definition of renewable hydrogen** that can be used across all European policies and laws. This is currently missing. Such definition should include the different sources and routes to produce renewable hydrogen and renewable hydrogen derivatives. The Renewable Energy Directive should refrain from promoting low-carbon fuels (including low-carbon hydrogen) and keep a firm focus on renewables.

The revision of the Directive should also aim at designing a robust certification system across the EU for **renewable hydrogen** linked to Article 19 that ensures the compatibility between renewable support schemes and Guarantees of Origin to enable the uptake of a European renewable hydrogen market over the next decade.

And the revision of electrification measures in the Directive could use as guidance the **3 criteria of additionality, geographic and temporal correlations set out in the Renewable Energy Directive on Renewable Fuels of Non-Biological Origins** when an electrolyser is connected to the grid (Article 27 dealing with transport). But also adapt them to reach the objectives of the EU Hydrogen Strategy when decarbonising other economic sectors.

**New definitions: renewable energy hybrid plants (wind/solar/storage); and offshore hybrids (offshore wind combined with an interconnector (Article 2)**

The **Renewable Energy Directive should include a definition of renewable energy hybrid power plants in Article 2**. These are plants where different renewable generation technologies - such as wind and solar - share the same grid access point, also potentially in co-location with storage.

Renewable hybrid power plants are becoming an increasingly important reality for the production and storage of renewable electricity, with huge benefits for the acceleration of renewable-based electrification and system integration based on grid optimisation and sustainability criteria. By defining renewable hybrid power plants, the Directive would set an important legal basis for further regulation of those assets – in particular clear guidelines for permitting that is treated today on a case-by-case basis.

The Directive should cover grid access, monitoring practices, renewable energy tracing and integration of storage. Moreover, to make renewable hybrid power plants viable, Members States should enable developers of such assets to install more total renewable capacity than the one contracted with the grid (with the condition that the exported power will not be exceeding the contracted one). In those countries that want to further support the development of renewable hybrid power plants, these assets can even export more power than the one contracted with the grid when actual grid conditions allow for this.

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2 Please refer to **Renewable Hybrid Power Plants** (position paper), WindEurope, 2020
The recast Renewable Energy Directive should also include a definition of offshore wind hybrids. These assets combine offshore wind farms with interconnectors linking 2 or more markets. Offshore Hybrids are essential to the successful deployment of 300 GW of offshore wind in the EU by 2050. They save space and money by optimising the use of offshore and onshore transmission infrastructure. And they help to balance the European energy system as shares of variable renewables increase.

As recognised by the EU Offshore Renewable strategy, the development of offshore hybrids requires adjustments to the EU’s regulatory framework. Notably to provide developers and TSOs additional clarity on revenue perspectives which is critical to triggering investment. Having a definition of offshore hybrids enshrined in the Renewable Energy Directive would help ensure the necessary consistency across EU legislation (e.g. infrastructure, market design, system operation) providing a fit-for-purpose EU framework to the benefit of EU tax payers and energy consumers. Developing such a definition would be a concrete driver for Member State cooperation in accelerating the deployment of renewables.

**2030 renewable energy target (Article 3)**

2030 is a critical milestone on Europe’s path towards decarbonisation. Europe needs the right level of renewable energy ambition that drives investment decisions in renewables in the 2030s and 2040s and that puts the continent firmly on track to deliver climate neutrality by 2050.

Backloading renewables deployment would mean Europe fails to deliver on its Green Deal strategy. And therefore lose the economic benefits, jobs, supply chain development and global technology leadership in wind technology that has resulted from the Europe being a first-mover on climate action.

If Governments fully implement their 2030 National Plans delivering a 32% renewable target Europe will have 450,000 jobs in wind (up 50% from today). But if they fail, Europe will lose 20,000 jobs compared to today. With higher 2030 renewable energy ambition the economic benefits will only amplify. But so will the missed opportunities resulting from delayed action.

The current 2030 renewable energy target of 32% therefore needs to be revised upwards to ensure Europe gets the most from its key climate mitigation technology. To reinforce the momentum in wind energy cost reductions, drive faster decarbonisation across the European economy, and maximise the contribution of the wind sector to the economic recovery from the COVID-19.

Article 3 of the Directive should set a target of **at least 38% - 40% of renewable energy** in the EU final energy consumption by 2030, in line with the European Commission’s Impact Assessment accompanying the proposal to raise the GHG emission reduction target to 55%.
The revised EU Emissions Trading System should:

- Adapt the emissions cap to bring the ETS in line with the 55% GHG emission reductions target through a combination of rebasing and an increase in the Linear Reduction Factor;
- Keep the intake rate of the Market Stability Reserve at 24% after 2023;
- Expand the ETS to the intra-EU maritime sector;
- Not trade Carbon Border Adjustment Mechanism allowances on internal EU carbon market;
- Set a level-playing field in the allocation of free allowances to fossil-based and renewable hydrogen;
- Exclude fossil fuels funding from the Modernisation Fund.

The European Emission Trading System (EU ETS) is the central EU policy to regulate CO2 emissions and deliver effective price signals for market operators and investors. These signals impact investment decisions as well as the merit order of the wholesale power market.

For several years the EU ETS market has suffered from oversupply of EU CO2 allowances and consequently experienced a very low CO2 price. This trend has reversed with the revision of Phase IV and its important mechanisms e.g. the Market Stability Reserve. This, together with a higher Linear Reduction Factor, is crucial to align demand and supply of CO2 allowances in line with the EU’s 2050 decarbonisation objective.

A revision of the EU ETS Directive with a view of strengthening the system will contribute to aligning the ETS with the increased EU 2030 GHG ambition. And underpin the delivery of the European Green Deal by sending markets signals for a cost-effective energy transition. This revision fits into the broader exercise of law- and policy-making that aims at reaching climate neutrality. Ultimately, the EU ETS should be made fit for purpose to incentivise renewables-based electrification in all final energy uses through an accelerated renewable energy capacity buildout.

The current EU ETS has been designed long before Europe started its journey towards a complete decarbonisation set by the European Green Deal. National Governments are collectively committed to climate neutrality. Coal phase-outs have been recently introduced at national level. These measures are likely to have a significant impact on the quantity of allowances that will be released on the market over the next years affecting the CO2 price.

The EU ETS Directive should reflect the 2030 55% greenhouse gas emissions reduction target by adapting the emissions cap through a combination of a one-time rebasing and an upwards revision of the Linear Reduction Factor. The respective contributions of the rebasing and revision of the linear reduction factor should be calibrated to send a clear signal while minimising market disruptions.

The Market Stability Reserve should be further strengthened by keeping the intake rate at 24% after 2023, instead of lowering it to 12% as is currently foreseen in the ETS Directive. The revision should also aim to expand the ETS to additional sectors of the economy where faster decarbonisation will be a non-regret option in particular the intra-EU maritime sector.

The allocation of free allowances to fossil-based hydrogen needs to be revisited in line with the EU Hydrogen Strategy. Today only renewable hydrogen is exposed to carbon pricing. Fossil-based hydrogen production, due to its exposure to international competition, receives most of its EU ETS allowances for free. Although renewable hydrogen production has no emissions and is not covered by the EU ETS, it is exposed to ETS prices through the cost of electricity. This means that when switching from fossil to renewable hydrogen production, the free allowances are lost and the cost of carbon is not reflected anywhere. As a result, renewable hydrogen is less competitive than its fossil-based counterpart. Aligning the ETS with the Hydrogen Strategy would create

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3 The European Council Conclusions of December 2020 also stress the need for strengthening the ETS.
a level-playing field for renewable hydrogen and support the objective of scaling it up and making it competitive already by 2030.

A robust CO2 price will ensure the fulfilment of the polluter-pays principle and put a price on climate-harmful emissions. It is essential that other climate related policies such as the Carbon Border Adjustment Mechanism (CBAM) be compatible with the strengthening of the EU ETS. The implementation of a CBAM should in no event result in an increase in the supply of tradeable emissions allowances.

Revenues deriving from selling allowances under the ETS should be used in their entirety for purposes that actively support the climate-neutrality target, such as faster deployment of renewable energy sources and investments in electricity grid infrastructures.

The Modernisation Fund supports low-income Member States in decarbonising their economies. In particular Article 10d of the ETS Directive prevents most of the beneficiary States\(^4\) from using the Modernisation Fund to support projects related to solid fossil fuel deployment. This wording is not in line with EU climate targets as it only prohibits funding hard coal and lignite but allows for other fossil fuels to play a major role in those countries, without effectively boosting renewable energy deployment. WindEurope therefore recommends that funding of all fossil fuels is excluded from the implementation of Modernisation Fund.

Following the most recent technology developments and reflecting the increasingly growing role of renewables in the EU energy mix, the Modernisation Fund should also ensure that storage solutions and ‘hybrid’ renewable energy power plants (plants with any combination of wind, PV and storage) are eligible as investment projects. Investments should support the development of electricity grids.

\[^4\text{Member States with a GDP per capita at market prices below 60\% of the Union average in 2013 can benefit from the Modernisation Fund. No support from the Modernisation Fund shall be provided to energy generation facilities that use solid fossil fuels, other than efficient and sustainable district heating in Member States with a GDP per capita at market prices below 30\% of the Union average in 2013.}\]
The new Carbon Border Adjustment Mechanism should:

- Ensure uninterrupted access to global supply chains of raw materials;
- Keep wind turbine exports competitive within and outside the EU;
- Not undermine EU internal power market reforms and electricity price formulation; and
- Be a tool of, and not an obstacle to, EU climate diplomacy.

Wind energy will be the key delivering technology of the EU Green Deal in the Commission’s Long Term Decarbonisation Strategy. Hitting the EU’s climate neutrality goal will require a 25-fold increase in offshore wind capacity. And an even bigger increase in terms of onshore wind capacity. Industry can deliver the volumes pending an active EU industrial policy for renewables that ensures this huge expansion of wind is made in Europe and our industry is cost-competitive within and outside the EU.

Delivering the economic benefits of wind to Governments, business and citizens means wind energy companies will continue to rely on global supply chains for flexibility and competitiveness. They will require sensible trade policies that guarantee access to raw materials supply chains (e.g. steel, glass fibre). And an EU Export Strategy for Renewables to put Europeans on a par with Asian competitors that outcompete Europe us on terms of finance in non-EU markets.

If designed well, a Carbon Boarder Adjustment Mechanism (CBAM) could be an important tool to leverage the competitiveness of the European wind energy industry in the global race for clean energy investments.

Its objective would be to limit carbon leakage as carbon costs rise and free allocation of EU emissions allowances under the ETS is phased out. It will be applied to the carbon embedded in imports of industrial products from third countries. The CBAM will be applied to the carbon embedded in of industrial products – and possibly also electricity – imported from third countries. It is likely that the measure will require importers to surrender ‘virtual’ emissions allowances (EUAs) commensurate to the carbon content of the import in question. The value of these virtual EUAs would mirror the real carbon price, but they would not be tradeable on the real carbon market.

The European wind industry considers that the CBAM should be designed so as to:

- **Ensure raw materials availability for wind turbine & equipment manufacturing.** Applying a CBAM to raw materials like steel only could distort the EU wind industry’s supply chain, particularly as regards processed products containing relatively high quantities of raw materials likely to fall within the scope of the measure (such as steel wind towers, motors, and generators). The result could be an increase in imports of processed products in order to circumvent the CBAM, and a departure of value-added from the EU.

- **Keep wind turbine exports competitive.** The CBAM could increase manufacturing costs for European wind turbine manufacturers and reduce the competitiveness of made-in-Europe exports in third country markets. If this impact is not mitigated the EU could cease to be an export hub for the European wind industry. At the same time, mitigating the negative impact on competitiveness with refunds or rebates could raise issues under WTO law, and might also cause third country markets to be closed to EU wind industry exports in retaliation.

- **Avoid spikes in EU electricity prices.** If applied to imports of electricity, the CBAM could impact electricity prices. This will have mixed consequences for market operators and progress towards renewables-based electrification. These consequences should be carefully considered.

- **Strengthen EU’s climate diplomacy.** Implementing a CBAM too soon could undermine climate diplomacy, e.g. the promotion of emissions trading and carbon pricing systems, Environmental Goods Agreement negotiations and international sectoral agreements.