Coal phase-out and the European Green Deal: Implications for the European Union Emissions Trading System
The Instituto Internacional de Derecho y Medio Ambiente (IIDMA) is a non-profit organization registered in Spain and founded in 1996 with the aim of contributing to environmental protection and sustainable development through the study, development, implementation and enforcement of Law from an international and multidisciplinary approach. Since 1998, IIDMA is accredited as observer to the United Nations Environment Programme Assembly. In 2001 it was declared of public interest by the Spanish Ministry of Home Affairs.

For more information about IIDMA, please visit: http://www.iidma.org/

This report was finalized in November 2020 and reflects the situation at that time. It is a summary of the Spanish report “La Retirada del Carbón y el Pacto Verde Europeo: Implicaciones en el Régimen de Comercio de Derechos de Emisión de la Unión Europea”, available at: http://iidma.org/attachments/Publicaciones/26_11_2020_Informe_RCDE_UE.pdf
Index

Acronyms ................................................................................................................................................. 4
Introduction .................................................................................................................................................. 5

2. Coal in the EU electricity system: closure plans and impacts on the EU ETS ...................................... 9
3. Recommendations ................................................................................................................................... 12
## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>EU ETS</td>
<td>European Union Emissions Trading System</td>
</tr>
<tr>
<td>MSR</td>
<td>Market Stability Reserve</td>
</tr>
<tr>
<td>GHG</td>
<td>Greenhouse gas</td>
</tr>
<tr>
<td>GW</td>
<td>Gigawatt</td>
</tr>
<tr>
<td>LRF</td>
<td>Linear Reduction Factor</td>
</tr>
<tr>
<td>MS</td>
<td>Member States</td>
</tr>
<tr>
<td>Mt</td>
<td>Millions tonnes</td>
</tr>
<tr>
<td>MW</td>
<td>Megawatt</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organisation</td>
</tr>
</tbody>
</table>
Introduction

In 1997, with the adoption of the Kyoto Protocol, binding greenhouse gas (GHG) emission reduction targets were set for 37 industrialised countries and the European Union (EU).

For the EU, then composed of 15 Member States (MS), the reduction target for the period 2008-2012 was of 8% compared to 1990 levels, with a different margin for each country depending on economic and environmental conditions. In order to make it easier for countries to meet their targets, the Kyoto Protocol introduced three flexibility mechanisms, instruments that are complementary to domestic policies and measures and which form the fundamental basis to meet the objectives of this Protocol. One of them is the European Union Emissions Trading System (EU ETS) under Article 17 of the Protocol.

The aim of this report is to analyse the EU ETS, to assess the impact that the massive closure of coal-fired power plants, planned over the next two decades in different European countries could have on it and to make recommendations to strengthen its effectiveness.

To this end, in the first place the report briefly examines the main regulatory developments introduced in the latest reform of the EU ETS in 2018, including the possibility for MS to voluntarily cancel emission allowances to compensate for the closure of electricity generation facilities in their territory due to the implementation of additional national measures. Then, an overview of the current situation of coal-fired power plants in Europe and the phase-out plans planned for the coming years is provided, analysing the impacts that these closures could have on the operation of the EU ETS. Finally, the main recommendations in view of the future reform of the EU ETS are provided.
CHAPTER 1

The European Union Emissions Trading System: what's new for phase IV?

The EU ETS is one of the EU’s main tools for fighting climate change and it was established by Directive 2003/87/EC1 (hereinafter EU ETS Directive). Currently, it is operational in all 27 EU MS plus Iceland, Norway and Liechtenstein. In addition, although the United Kingdom ceased to be an EU MS on 31 January 2020, this country will remain a full participant in the EU ETS during the transition period from 1 February to 31 December 20202. Also, in January 2020, Switzerland linked its internal carbon market to the EU ETS.

The EU ETS began operating in 2005 and it is structured in phases (or trading periods). The EU ETS is currently in Phase III3, which will end on 31 December 2020. This phase was designed to achieve the 2020 EU climate action objective. That is, to reduce GHG emissions by 20% with respect to the base year (1990). For the sectors covered by the EU ETS, this target meant reducing their emissions by 21% in 2020 compared to 2005. Phase IV of the EU ETS will begin on 1 January 2021 until the end of 2030. The EU ETS legislative framework for this phase was revised in early 2018 with the adoption of Directive (EU) 2018/4104 in order to increase emission reductions and achieve the EU’s GHG emission reduction target for 2030, currently set at at least 40% compared to 1990. However, it should be stressed that this percentage will increase as a result of the future review of the EU ETS, which is a consequence of the future new EU emission reduction target for 2030 (see Chapter 3). Taking into account a 40% target, the EU ETS sectors must reduce their emissions by 43% compared to 2005 levels. To achieve this goal, the Directive introduced a number of measures including: increasing the linear reduction factor, continuing free allocation with improved provisions for carbon leakage, auctioning as the main method of allocation of allowances, changes in the Market Stability Reserve (MSR) and the creation of several funds to finance the transition to a low-carbon economy.

Linear Reduction Factor (LRF)

In order to accelerate the reduction of emissions, from 2021 the cap on allowances issued will be subject to an annual Linear Reduction Factor (LRF) of 2.2%, which will also apply to the aviation sector. In addition, along with small installations5, small emitters may also be excluded from the EU ETS6, provided that simplified monitoring mechanisms are in place to assess the amount of their emissions.

2 From January 2021 the UK will leave the EU ETS and it plans to replace its participation in the European scheme with a national ETS (which could be linked to the EU system or operate as a stand-alone mechanism), with a carbon tax being considered as a back-up option. However, under the Protocol on Ireland and Northern Ireland, from 2021 electricity generating installations in Northern Ireland will remain in the EU ETS, with relevant rights and obligations (source: EC).
3 The duration of the first two phases was: Phase I (2005-2007) and Phase II (2008-2012).
5 Article 27, Directive 2003/87/EC.
6 Article 27a, Directive 2003/87/EC.
Free allocation

To prevent the risk of carbon leakage, the free allocation system will also continue in Phase IV. However, this system was modified to pay particular attention to sectors with the highest risk of carbon leakage. These sectors will receive 100% of their allocations for free, while for less exposed sectors a gradual phase-out of free allocation is foreseen from 2026, from a maximum of 30% until their disappearance in 2030.

As in Phase III, no free allocations will be given to electricity generation. However, the derogation provided for in Article 10c of the EU ETS Directive will remain available in Phase IV, with an option for eligible MS to use all or part of their allocations under Article 10c to support investments under the Modernisation Fund. On the basis of the information submitted to the EC by the MS, the use of this derogation will be very limited as seven out of the ten eligible MS chose not to use it. In addition, a considerable amount of allowances will be reserved as free allocations for new entrants or expanding installations. This reserve is common and unique to the whole EU and will be governed by EU law. In addition, free allocations will become more dynamic as the allocation to each installation will be adapted much more frequently to the actual situation of the installation at any given time. In particular, allocations may be adjusted annually to reflect significant reductions or increases in the level of activity. The adjustment threshold has been set at 15% (compared to the activity level initially used to determine the free allocation in the allocation period) and will be assessed on the basis of a two-year moving average. In this respect, it should be recalled that in Phase III, a change in activity of at least 50% was required for the adjustment to take place. The specific rules for the adjustment of the free allocation have been specified and further developed in the Commission Implementing Regulation (EU) 2019/1842.

The free allocation for Phase IV will be divided into two allocation periods, covering the years 2021-2025 and 2026-2030 respectively. Furthermore, to reflect advances in technology and innovation, throughout Phase IV the benchmarks will in all cases be updated towards more demanding values, twice on the basis of actual data. This will result in a lower free allocation.

The level of exposure of sectors to carbon leakage has been assessed through an indicator that is the result of multiplying the intensity of the sector’s trade with third countries by the sector’s emission intensity. On the basis of this indicator, in February 2019 the Commission adopted, in the annex to Commission Delegated Decision (EU) 2019/708, the list of sectors and subsectors considered to be at risk of carbon leakage, which will be valid for the whole of phase IV.

Auctioning of allowances

Throughout Phase IV, auctions will be the main method of allocating allowances. It is important to mention that the revised EU ETS Directive, in its Article 12(4), provides the possibility for MS to cancel...
allowances from their auction volumes in the event of closure of electricity generation capacity in their territory due to additional national measures\textsuperscript{13}. In addition, in order to ensure predictability for operators and EU ETS participants with regard to the amount of allowances available for auctioning, the possibility of allowance cancellation is limited to an amount corresponding to the average verified emissions of the installation concerned over a period of five years preceding the closure. Commission Regulation (EU) No 1031/2010\textsuperscript{14} provides that, in the event of cancellation, the MS concerned shall notify the EC of its intention at the latest by 31 December of the calendar year following the year of the closure, using the template set out in Annex I to the Regulation.

**Market Stability Reserve**

In the context of the revision of the EU ETS for Phase IV, two important changes to the functioning of the MSR were introduced, including the doubling of the allowances’ amount that can be introduced into the MSR from 12% to 24% between 2019 and 2023. This implies a substantial increase in the rate at which the allowances surplus in the market is reduced. The MSR will return to the initially planned rate of 12% from 2024 onwards, unless it is decided otherwise during the reform planned for 2021. Furthermore, from 2023 onwards, the amount of allowances in the MSR will be limited to equal the number of allowances auctioned in the previous year, being any surplus permanently cancelled.

**Financing funds**

Phase IV will also have several low-carbon project finance mechanisms to help energy-intensive industrial sectors and the power sector meet the innovation and investment challenges of moving to a low-carbon economy. There will be two new funds:

- **Innovation Fund**

  It will extend existing support under the NER300 programme and support, on a competitive basis, early market development and commercial-scale demonstration of innovative technologies and leading-edge innovation in the sectors covered by the EU ETS. It will be funded through the auctioning of at least 450 million allowances and any unspent budget from the NER300 programme. The Innovation Fund is a key funding instrument for meeting the EU’s climate objectives under the European Green Deal and strengthening Europe’s technological leadership on a global scale.

- **Modernisation Fund**

  The Modernisation Fund is a tool available only to countries with a per capita GDP of less than 60% of the EU average\textsuperscript{15} and should be used to modernise the energy systems of these countries. It will support investments to modernise the electricity sector and other wider energy systems, boost energy efficiency and facilitate a just transition in carbon-dependent regions. In order to establish the Modernisation Fund, the revised EU ETS Directive foresees that 2% of the total quantity of allowances will be auctioned and that eligible MS may add allowances to this fund in accordance with Articles 10(2)(b) and 10c of the Directive.

\textsuperscript{13}This possibility comes from the recognition of the interaction between national and EU climate policies.

\textsuperscript{14}OJ L 302, 18.11.2010.

\textsuperscript{15}Bulgaria, Czech Republic, Estonia, Croatia, Latvia, Lithuania, Hungary, Poland, Romania and Slovakia.
CHAPTER 2

Coal in the EU electricity system: closure plans and impacts on the EU ETS

In 2019, the electricity sector was responsible for more than half (52%) of EU ETS emissions, despite a sharp decrease in emissions as a result of the increase in installed renewable energy capacity (in particular wind and solar) and the collapse of coal-fired generation. The latter fell by nearly 25% in 2019 compared to the previous year, from 614 to 465 TWh, corresponding to 14% of total EU electricity production\textsuperscript{16}. In terms of emissions, coal-fired power plants were responsible for 30% of the total EU ETS in 2019, with Germany and Poland leading the way\textsuperscript{17}.

![Figure 1 - CO\(_2\) emissions (Mt) from coal-fired power plants in 2019](image)

\textit{(Source: own elaboration. Data: EMBER-climate)}

Over the years, coal-based electricity production has been increasingly challenged due to both its significant contribution to climate change and the pollution it generates. Coal phase-out is a priority if the EU wants to achieve its climate objectives and several MS with coal-fired power plants have already committed to doing so. Up to this date, eleven MS have established specific dates for ending coal-fired power generation. Five of them will do so by 2025, namely France (2022), Slovakia and Portugal\textsuperscript{18} (2023), Ireland and Italy (2025). Another five countries will do so by 2030 at the latest, which is the deadline for being in line with the objective of the Paris Agreement. These countries are: Greece (2028), the Netherlands and Finland (2029), Hungary and Denmark (2030). In addition, Germany passed a law at the beginning of June to regulate the progressive phase-out of coal as an energy source until its disappearance in 2038, too late to meet the Paris commitments. Sweden also had a closure plan, with a deadline of 2022. However, it closed its last coal plant in April 2020, becoming the third European country to abandon coal

\textsuperscript{16} Source: EMBER-climate.

\textsuperscript{17} Ibid.

\textsuperscript{18} The Portuguese energy company EDP announced in July 2020 the early closure of its Sines coal plant, the only one expected to be operational in Portugal beyond 2021.
completely, after Austria (April 2020) and Belgium (2016). In 2019, the "Coal Commission" was established in the Czech Republic with the task of setting a date for coal phase-out. At the moment, no final decision has been taken yet, but according to statements of the Czech Minister of Industry and Trade this date will most probably be 2038. In Poland, Romania, Bulgaria, Croatia and Slovenia a date for coal phase-out is not under discussion yet. In the case of Spain, no deadline has been officially set, although the forecasts included in the National Energy and Climate Plan (NECP) reflect that by 2030 the country will no longer have coal-fired power plants in its electricity generation mix. However, during the month of July 2020, the operators of the plants which are currently in operation announced the closure and/or reduction of their coal-fired capacity prior to 2030. Therefore, it is expected that the country will manage to abandon coal-fired generation by 2025 at the latest. Cyprus, Estonia, Latvia, Lithuania, Luxembourg and Malta have no coal-fired power plants. The United Kingdom set a coal phase-out date for 2024.

![Figure 2 - Installed coal capacity (MW) (as of July 2020) and target dates for phase-out](image)

(Source: own elaboration. Data: Europe Beyond Coal)

On the one hand, the EU ETS helps to remove coal from the electricity system. However, on the other hand, the EU ETS itself is affected by the closure of plants that use this fuel as there is a decrease in CO₂ emissions.

Among all the stationary installations covered by the EU ETS, coal-fired power plants represent by far the most CO₂ emitting ones and their massive closure could have significant consequences on the balance between supply and demand. As the EU ETS cap is fixed, the reduction in emissions resulting from the closures would result in a higher amount of allowances available on the market. In fact, if a coal plant were to close, the allowances it would have used to cover its future emissions would remain on the market and be available for others to use. According to estimates by Carbon Market Watch in its report published in September 2019, the closure plans confirmed to that date would add around 2.22 billion allowances to the market in the period 2021-2030, and 3.96 billion in the period 2031-2040, amounting to a total of 6.18 billion allowances available over the next 20 years. This represents around four years of current emissions under the EU ETS. Even if the MSR were to limit this effect by absorbing some of the surplus allowances in the market, the oversupply would be too great for the mechanism to cope with, unless it is

---

19 Carbon Market Watch, Avoiding A Carbon Crash: how to phase out coal and strengthen the EU ETS.
strengthened. It is therefore clear that, if measures are not implemented to prevent or address this new oversupply of allowances, the coal-phase out will lead to a drop in the price of allowances, making the rest of European coal power plants more profitable, leading to a loss of effectiveness of the EU ETS as an instrument to drive the shift towards low-carbon technologies.

In the case of Spain, although no deadline has been set for the exit of coal from the energy mix, it is important to remember that by mid-2020 eight coal plants (around 5 GW) were closed, representing more than half of the total installed coal capacity in the country. This closure was a consequence of the implementation of Directive 2010/75/EU on industrial emissions\textsuperscript{20}, as these plants could not comply with the emission limit values required by that Directive. The reduction of CO\textsubscript{2} emissions derived from these closures could also have negative consequences for the proper functioning of the EU ETS.

As the cancellation of allowances under the ETS Directive for the closure of electricity generation capacity is voluntary it is not sure that countries will opt for it\textsuperscript{21}. Therefore, it is crucial to get all countries to commit to the cancellation of these allowances and to do so through legally binding instruments. To this end, a modification of the EU ETS regulatory framework or, of national legislation, as a secondary option, is key.

\textsuperscript{21} On the basis of the information available at the time of this report, it seems that for the time being only Germany has expressed its intention to cancel the surplus emission allowances due to the closure of its coal-fired power plants. The volume of cancellations would depend on the operation of the MSR. (source: https://www.montelnews.com/es/story/berlin-cancelar%C3%A1-euas-con-el-cierre-del-carbon--actualiza/1079179).
CHAPTER 3

Recommendations

As mentioned above, the current EU target for reducing GHG emissions is set at 40% in 2030 compared to 1990. In order to achieve this objective, the EU ETS has set a target of a 43% reduction below 2005 levels. However, this 40% reduction is not in line with the 1.5°C objective of the Paris Agreement. Thus, on 17 September 2020, the EC presented an amendment\textsuperscript{22} to the proposed European Climate Law to include an emissions reduction target for 2030 of at least 55% as a starting point for achieving climate neutrality in 2050. The Commission’s proposal for a first European Climate Law was presented in March 2020\textsuperscript{23} and aims to convert the objectives established in the European Green Deal into legislation. The European Green Deal, presented by the EC in December 2019\textsuperscript{24}, represents the roadmap for making the EU economy sustainable, achieving climate neutrality by 2050 by turning climate and environmental challenges into opportunities in all policy areas and making the transition fair and inclusive for all.

However, many studies claim that an appropriate value for the EU to meet the 1.5°C target of the Paris Agreement would be a reduction of 55-60%\textsuperscript{25}. Along these lines, in October 2020, the European Parliament requested to increase the GHG emission reduction target to 60% by 2030.

Regardless of what the new reduction target for 2030 will be, the EC will carry out a review of all climate and energy legislation to adapt it to this target and is expected to present its legislative proposals by June 2021 at the latest. These include a review of the EU ETS, as many of its aspects currently need to be improved if this instrument is to fulfil its role in boosting decarbonisation and helping the EU to achieve climate neutrality by 2050. This necessary strengthening of the EU ETS could be achieved through the following measures.

- **Cap and LRF adjustment**
  
The EU ETS cap is currently too high and above actual emission levels, and must be lowered. This can be done by adjusting the LRF, whose revised value will depend not only on the climate ambition for 2030 but also on other elements, including:
  
  - The year in which it will be implemented. The later the new LRF is implemented, the higher its value should be.

  - Its baseline level. The baseline level from which the LRF is implemented follows a linear approach based on a historical figure (annual average of allowances issued during the period 2008-2012). To ensure an appropriate annual cap, the baseline level should be adjusted downwards to better reflect the real evolution of emissions. However, it is important to mention that lowering the cap as a result of the implementation of this reduction would cause...

---


\textsuperscript{25} SITRA, *The role of the EU ETS in increasing EU climate ambition.*
a decrease in the number of allowances available for free allocation, which at the end of phase IV could lead to the implementation of the uniform cross-sectoral correction factor\textsuperscript{26}, thus increasing the risk of carbon leakage. However, the introduction of a carbon border adjustment mechanism (see below) would make free allocation an unnecessary measure to address carbon leakage.

- **Scope of the EU ETS.** The possible extension of the scope of the EU ETS, and the way in which it would be designed, will also have an impact on the LRF.

A measure providing for the adjustment of the LRF combined with a reduction of its baseline level would be advisable to significantly reduce the number of new allowances placed on the market during Phase IV.

- **Strengthening MSR from 2024**

Under current legislation, the MSR admission rate is to be reduced to 12% from 2024 onwards. However, it is necessary to reinforce the MSR if it is to be maintained as an adequate system for limiting the oversupply of allowances in the market.

Installations covered by the EU ETS are currently emitting below the maximum limit. In 2018, this gap was estimated at 134 million allowances, which was significantly increased to around 250 million allowances in 2019. Although the MSR will ensure that fewer allowances reach the market than the annual cap, and despite the more ambitious LRF (2.2%) agreed for Phase IV, in the reference scenario\textsuperscript{27}, this gap between the cap and emissions is expected to continue over the next decade (average emissions are estimated to be 17% below the annual cap)\textsuperscript{28}. As a result, a large surplus of allowances is likely to remain on the market, preventing the EU ETS from giving the necessary investment signal to reduce GHG emissions cost-effectively and being a driver of low-carbon innovation. This can therefore only be addressed if the MSR is strengthened.

Furthermore, to reflect the evolution of the decarbonisation trend in the electricity sector, the MSR thresholds should be regularly updated. If the MSR remains unchanged, allowances could flood the market again.

- **Cancellation of allowances**

The voluntary nature of the cancellation of allowances in the event of closure of electricity generation capacity as a result of additional national measures, as provided for in Article 12(4) of the ETS Directive, does not guarantee that this will actually take place. In fact, the cancellation of allowances would mean for MS not to auction them and therefore to forego the revenues that they would have been able to obtain in case of auctioning. However, there are several arguments in favour of cancellation. Firstly, auctioning these allowances would mean increasing supply in

\textsuperscript{26} Currently, under the EU ETS, up to 43% of total allowances (with an additional 3% buffer) can be used for free allocation. If free allocation exceeds the maximum amount, a uniform cross-sectoral correction factor would be implemented lowering all free allocations to respect this overall limit.

\textsuperscript{27} Reference scenario: EU reduction of at least 40% of GHG emissions from 1990 levels by 2030, with EU ETS sectors corresponding to a 43% reduction by 2030 compared to 2005 levels.

relation to demand, which would reduce prices and therefore revenues from all other allowances auctioned by the country. Low prices would also weaken the EU ETS and lead to smaller emission reductions. This deficit in emission reductions would have to be compensated for in some other way by the MS, which might require investments.

As a result, and in the event that the LRF and the MSR are not adequately strengthened, it would be desirable to obtain a commitment from all countries to cancel these allowances. This would require a modification of the EU ETS regulatory framework or of national legislation. In addition, this cancellation should take place regardless of whether the cessation of generation capacity is the result of the implementation of additional national measures or not. In addition, the average emissions over the last five years, as referred to in Article 12.4, should not refer to the five years prior to the cessation of capacity, but only to the years of full operation of the plant, because otherwise the average emissions will be underestimated. Finally, for plants with more than one thermal unit, the cancellation of allowances should also be possible in cases where one or more thermal units are withdrawn while the others remain in operation.

- **Inclusion of new sectors in the EU ETS**

  The choice of new sectors to be included in the EU ETS should be based on an *a priori* assessment of what their effective contribution to emission reductions would be. One of the possible sectors to incorporate could be *maritime transport*, for which there is currently no European emissions reduction target. According to the International Maritime Organisation the climate impact of this sector has grown by 10% in just six years and could increase by up to 50% by 2050 if no concrete measures are taken. This is mainly due to the fact that maritime trade has grown faster than the efficiency of ships has improved. However, within the same EU ETS, consideration should be given to the need to include new sectors in isolated and/or independent systems, because the prices of allowances needed to stimulate investment and structural change towards low-carbon technologies can vary significantly between sectors.

- **Setting a national minimum carbon price**

  Countries could also apply national minimum carbon prices. Preventing the price from falling below a fixed amount would help reduce the profitability of coal power plants and make the operators of these plants voluntarily decide to carry out the closures.

Finally, it should be mentioned that among the measures envisaged in the European Green Deal, there is a proposal to establish a Carbon Border Adjustment Mechanism for selected sectors, consisting of taxing imports of certain products according to the carbon emissions generated during their production process at origin. The aim is to try to mitigate the risk of carbon leakage due to the relocation of companies from the EU to third countries or to reduce the increase in imports from third countries less committed to reducing emissions.

---

29 The current regulation focuses only on monitoring, reporting and verification of emissions.
30 During the period from 22 July to 28 October 2020 the EC opened a public consultation phase designed to gather stakeholder views on this mechanism.
However, this measure will have to be carefully studied and defined in order to ensure full compatibility with World Trade Organisation (WTO) rules, in particular with the principles on non-discrimination between "like products" contained in the current General Agreement on Tariffs and Trade (GATT) 1994, which prohibit WTO members from discriminating between "like products" from different members or between imported and domestic "like products". Furthermore, it should be stressed that this mechanism would not be in line with the "principle of common but differentiated responsibilities" of the United Nations Framework Convention on Climate Change, as it would tax products according to their respective carbon footprint in a strictly equal manner, without taking into account the different degree of development of the countries of origin of the products31. The Carbon Border Adjustment Mechanism would be an alternative to the current free allocation of allowances or compensation for higher electricity costs, which are currently the support measures the EU is using to tackle carbon leakage from those EU sectors most threatened by relocation and external competition.

The EU ETS is a key element in Europe's energy transition, and the carbon price signal it generates will be vital in encouraging investment in clean energy, which will help determine the EU's success in reaching its climate-neutral target for 2050.

---

31 For more information see: Fernández Pons, X., “La propuesta de la Unión Europea relativa a un impuesto sobre el carbono en frontera y su compatibilidad con las normas de la Organización Mundial del Comercio”, available at: https://dialnet.unirioja.es/servlet/articulo?codigo=7388653.