

Response to Public Consultation on Border Carbon Adjustments

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Key Messages

1. **The EU discussion on anti-carbon leakage measures must not be allowed to distract from the broader objective of putting energy-intensive industry onto a pathway towards climate neutrality by 2050.** To decarbonise energy-intensive industries, the EU requires a policy package of measures. These measures will need to: a) support the first commercial-scale sites using climate-neutral technology, b) create an enabling state aid framework, c) facilitate investment in key infrastructure and feedstocks (such as Hydrogen and CCS), and d) include a robust framework for protection against carbon leakage that may in the medium-term and under certain conditions include a BCA. Since CO₂ prices in the EU ETS are too low and too uncertain to drive industry investments into climate neutral production, and since coordinated infrastructure planning is required, the EU ETS alone will not be sufficient to decarbonise heavy industry. Even a combination of BCAs and ETS reform will do little to alter this fundamental situation. BCAs must therefore not be allowed to distract from these other, urgent policy objectives.
2. **In the present economic and geopolitical context, we believe that the risk of BCAs becoming a divisive and distracting issue to the rest of the industrial decarbonisation package is high.** While we argue that a new carbon leakage protection system is necessary from the mid-2030s, currently several key conditions for BCAs to be implemented with a good chance of success are not in place. The EU would be acting unilaterally against the will of major trading partners. Many EU industrial facilities are not among the world's best performers when it comes to CO₂ intensity. Downstream sectors such as the auto sector are economically weakened and they would have to pay higher CO₂ costs. Some sectors may object if competing sectors within the EU are left out of the scope of the BCA, while they are included. Moreover, in the wake of the economic fall-out from the coronavirus, there is a heightened risk of border adjustment debates becoming hijacked for nationalist economic or political objectives.
3. **Unless developed as part of a coalition with major trading partners, BCAs would likely encounter significant domestic and international political opposition, creating risks about the EU's capacity to follow through with this policy.** In the short term, taking this risk is unnecessary: the current system of benchmark based free allocation (plus indirect cost compensation) can, if combined with complementary decarbonisation support policies for industry, be reformed to offer effective carbon-leakage protection until the mid-2030s, if not longer.
4. **However, in the medium-term – i.e. sometime between 2035 and 2040 - the system of free allocation will become unsustainable, as free allocation would consume 100% or more of total EU ETS cap.** Even once fully decarbonised, climate neutral EU industries will still face higher production costs than conventional technologies. **By this time, the EU will therefore need to shift to a longer term solution than free allocation.**
5. **Three long-term alternatives to free allocation exist to provide anti-leakage protection. The Commission should explore all three of these options to fully appreciate their respective costs**

and benefits. These three main options are: a) carbon product standards, applied to all domestically-produced or imported goods sold in the EU's internal market b) Border carbon adjustments c) free allocation plus carbon-charge based approaches. Each of these options has its pros and cons. However, one of them will need to be chosen. What matters is a robust anti-leakage framework – thus all alternatives should be considered.

6. **In our view, the best of the above three options for the EU would be to aim to implement climate-neutral product standards for all energy intensive basic materials sold in the EU's market by around 2035.** This would be simplest from a WTO-legal, administrative simplicity, and political-economy perspective. Developing standards would provide the clearest and least uncertain signal for industry, thus doing most to facilitate the EU's domestic transition. Climate neutral product standards could be set based on existing technological knowledge and enter into force between 2035-40, thus providing clarity for industrial investment today and replacing free allocation from that date.
7. **The process of developing the policy infrastructure for standards is also likely to be a no regret action:** For the sake of implementing its own domestic transition, the EU will probably need to set standards for domestic consumption of energy intensive goods *in addition to carbon pricing*. This follows from the reality that the CO₂ carbon price is currently too low and too volatile to drive investment by itself. The EU standards linked to trade measures also have several precedents, such as EU measures implementing the Montreal protocol for ozone depleting substances, EU measures against imports of “blood diamonds”, or EU Measures against imports of illegally harvested timber or fish from illegal or unregulated fishing activities. Given the importance of its internal market, the EU has been quite successful in the past to engage its international trading partners in cooperation on the development and effective implementation of such standards.
8. **Under all long-term solutions, the EU will need to prepare the diplomatic and technical groundwork, for long-term anti-leakage solutions to be implemented.** Things like defining long term product CO₂ standards, certification and labelling systems and diplomatic or technical coordination with international trading partners are no regret measures that the EU could undertake during the next 5 years. Whichever the approach(es) taken, to the extent that the EU can build coalitions adopting common approaches, it will increase its capacity to avoid and resist eventual retaliation.

1. Context

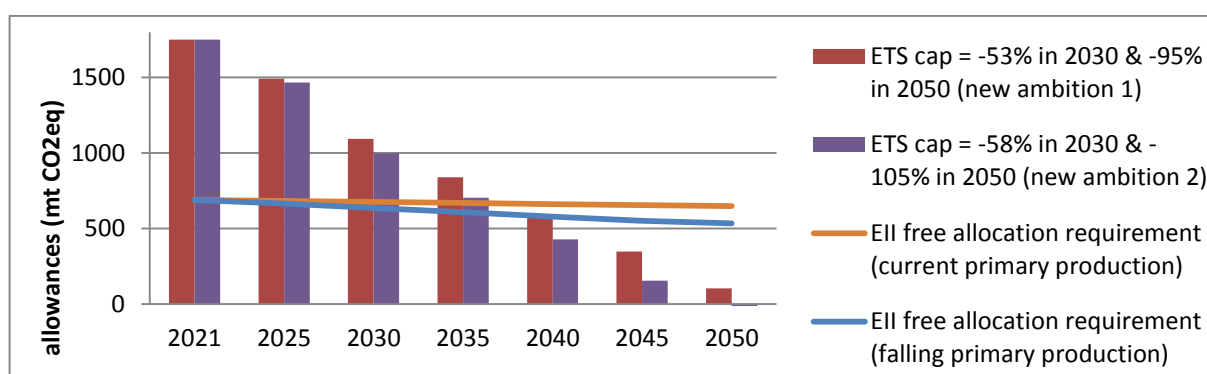
Agora considers that any thorough assessment of Border Carbon Adjustments to address carbon leakage must begin with a clear understanding of the present context:

First and foremost, **an overarching objective of this Commission must be to put energy-intensive industry on a pathway to climate neutrality by 2050, as noted by the Green Deal Communication**. In this context, measures to mitigate the risk of carbon leakage will need to be a part of the policy package that can create a robust framework for investment. While necessary, anti-leakage measures on their own do not make a business case for investment in climate neutral technologies and infrastructure. Therefore, the EU discussion on anti-leakage measures must not be allowed to distract from or undermine this broader and extremely urgent objective.

Secondly, **a relatively well-functioning anti-leakage system (free allocation) already exists and can be continued with small changes until at least 2030, if not longer**. Therefore, the EU does not need to rush to a new solution to carbon leakage for which the international acceptance and support may not be in place. The economic fall-out of the coronavirus response, while still uncertain, may also make the international politics of industry protection yet more complicated. The EU should at the very least, use the time available to try to build international acceptance and support of its approach.

Thirdly, **beyond the approximately mid-2030s, the current anti-leakage system will become unsustainable (see Figure 1)**. Genuinely protective levels of free allocation would begin to consume an increasingly large share of, and eventually exceed, the ETS cap. The EU must therefore prepare today to shift to an alternative, and more sustainable, anti-leakage system beyond 2030. This solution must be one that can ensure robust protection of energy intensive industries as they moves to decarbonised, but more expensive, production technology, ahead of other nations.

Figure 1. Estimated evolution of EU ETS cap under higher ambition scenarios (bars) and expected free allocation requirements at the full benchmark under two different primary production scenarios (lines)*



*The primary production of certain energy intensive products may fall due to a range of factors, including the growth of more circular production of goods, declining oil refining for transportation, and shutdowns of excess capacity.

2. What matters is effective anti-leakage protection. Several options should be considered, not only border carbon adjustments.

Border carbon adjustments are not an end in themselves. While the EU will need to prepare a transition to more sustainable anti-leakage measures post-2030, BCAs are just one possible solution. Our analysis suggests that longer term solutions for anti-leakage measures could take several forms. While BCAs may be desirable from some perspectives, they also carry a high level of political and legal risk. The EU should therefore broaden its analysis of BCAs to consider the full range of anti-leakage options that could replace or complement free allocation over the longer term.

We see four main alternatives that the EU should consider:

1. Modified free allocation and (state) aid to invest
2. Border Carbon Adjustments
3. ETS-linked consumption-charges for EII products
4. Carbon Product Standards

Each of these options has advantages and disadvantages that need to be weighed. Under certain circumstances, some of these solutions may be combined. In particular, Option 1, which consists of extending the current free allocation system beyond 2030, would only be a temporary measure. Ultimately, the EU will need to settle on one of or a mix of the last three options as a long-term solution.

Agora believes that a step-wise approach beginning with Option 1 - i.e. periodically continuing free allocation together with reforms to the scope and free allocation system under the ETS – and then ultimately moving to Option 4. (Carbon product standards) is preferable. Given the complexities, a combination of measures, beyond just BCAs, may be needed. We would therefore encourage the Commission to expand the scope of its assessment to include not only BCAs, as historically conceived, but also other options to address carbon leakage.

3. Four basic options are available to the EU. All of them involve pros and cons. However, we must choose one of them.

Option 1. (temporary) Modified free allocation and (state) aid to invest

A temporary solution to the carbon leakage problem is to find ways to extend the current system of free allocation over a longer period, thus delaying the need to shift to alternative anti-leakage measures, such as BCAs. This option may make sense if the EU believes that the conditions will not be aligned to move to alternative solutions for a significant number of energy intensive sectors before ca. 2030-2035¹.

Assuming the EU raises its 2030 and 2050 climate ambition, free allocation would quickly begin to consume a large share, and eventually exceed, the total annual allocation under the ETS cap. This is likely to become politically unsustainable with regard to other sectors, even before the ETS cap is exceeded. Thus, some way to reconcile the declining ETS cap and the need to still provide sufficient protection to industries would be needed. Two stylised options might be considered relying on some form of temporarily continued free allocation:

Option 1a. Expanded ETS and cross-sectoral transfers of initial allocation

One option to address this problem might be to add additional sectors to the EU ETS. For example, adding energy use in the buildings and transport sectors to the ETS would add emissions in the order of 569 and 897 million allowances respectively to the ETS. Similarly, sales of fuels to non-energy intensive industries (currently outside the scope of the ETS) could potentially add around 200 million allowances to the ETS. Adding domestic shipping or removing free allocation to domestic aviation in the ETS could potentially add a further 21 and 32 million allowances. These options would increase the overall allocation pool in the ETS by anywhere between 2% and 70%. By contrast, EII sectors represent roughly 45% of the ETS allocation pool today. Thus, even with modest intersectoral transfers of allowances, it could allow for energy intensive industry to be freely allocated allowances for a significantly longer period without the full ETS cap being consumed.

The logic of the expanded ETS approach is conditional on the assumption that adding additional sectors to the ETS makes policy sense on its own merits. The answer to this question is beyond the scope of this consultation. One potential drawback of this approach is that it would mean that sectors ceding a share of their free allowances to industry may fear that it will cause their ETS costs to rise. However, this would nonetheless be compatible with the polluter pays principle and consistent with past approaches under the ETS. This approach may therefore be either combined or substituted with Option 1b, now described.

Option 1b. Free allocation gradually replaced by aid to invest in low carbon

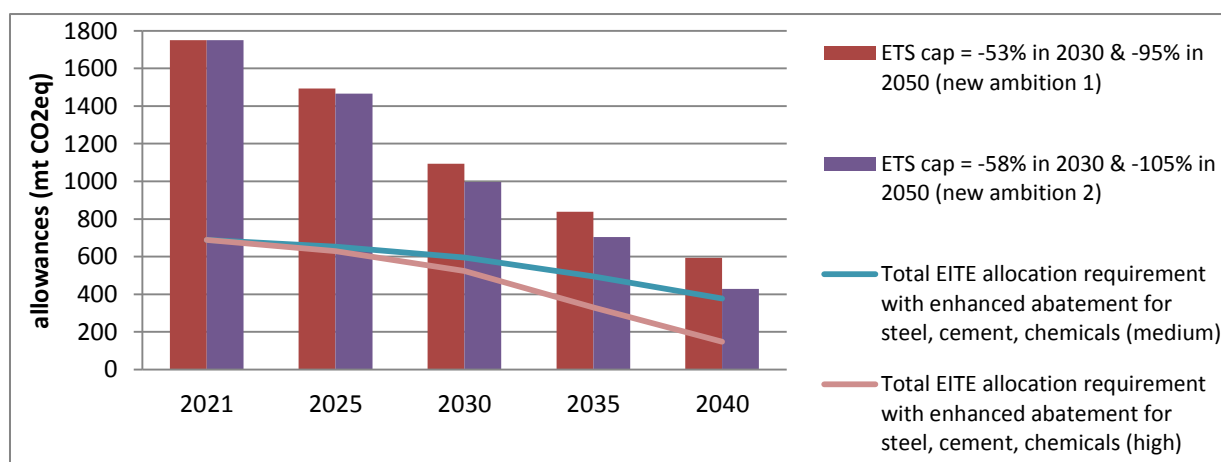
An alternative approach would be to gradually reduce the total free allocation it provides to ETS installations by essentially substituting it with state aid. However, if state aid is to be given, then it is

¹ This is not a purely theoretical scenario. BCAs face substantial political, legal and administrative hurdles to being effectively implemented in the next decade, especially if the EU is not able to implement them collaboratively with key trading partners, such as the US and China. Similarly, carbon product standards, will require the EU to first build up decarbonised industrial production capacity before they can be implemented.

likely that governments would require some valuable outcome for the climate on the basis of this aid. How would this be done?

One option might be to divide the installations into two groups. Group 1 would continue to receive free allocation, but perhaps at a declining share of the full conventional technology benchmark. Meanwhile, Group 2 would not receive free allocation, but would instead receive EU and/or state aid to invest into deep decarbonisation solutions. Installations in Group 2 could receive the aid on a project-by-project basis. Industrial deep decarbonisation projects would apply to receive an annual payment, equivalent to the breakeven carbon price for their project, multiplied by their emissions reductions per unit of production. Figure 2 shows how this might help to reduce the need for free allocation, assuming such contracts were provided only to the steel, cement and petrochemicals sectors.

Figure 2. How free allocation requirements (lines) may fall due in comparison to the ETS cap (bars) if aid is provided to steel, cement and chemicals sectors to invest in climate neutral production.

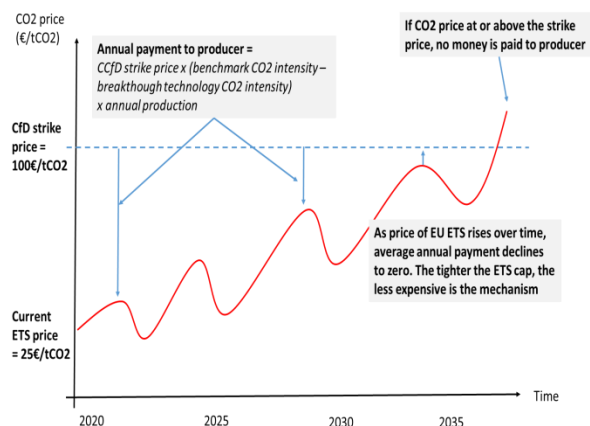


Note that this approach would be similar, but different in certain crucial respects, to an approach based on “carbon contracts for difference”, as proposed by Agora² (see Figure 3). Under Carbon Contracts for Difference (CCfDs), member states and the EU would essentially provide aid only for the difference between the prevailing ETS carbon price and the breakeven CO2 price for the project. As such the explicit project-based state aid cost for the member states is reduced by the part of the incremental cost-gap that is paid by the value of the free allocation to the installation.

However, the option outlined in this section would be *different* to the CCfD model described above, because the new low-carbon installation would *not* receive any free allowances like other conventional installations. As such, the low-carbon projects would not have the possibility to sell their free allocations on the market in order to pay for a part of the incremental cost of the low-carbon technology (i.e. the value represented by the space below the red line in Figure 3). Thus, to help these projects become viable, member states would now have to pay for 100% of incremental cost of the project compared to the conventional ‘high carbon’ competition (i.e. the full strike price in Figure 2).

² https://www.agora-energiewende.de/fileadmin2/Projekte/2018/Dekarbonisierung_Industrie/164_A-EW_Klimaneutrale-Industrie_Studie_WEB.pdf

Figure 3. Carbon contracts for difference (stylised diagram)



Moreover, as time passes, and as carbon prices rise, the cost for the state would not be reduced, since the competitiveness gap of the project would not be improved by an increased value in the allowances it received.

In our view, a state aid for investment approach has the advantage that some form of support to deep decarbonisation projects in industrial sectors is likely to be needed during the next 10 to 15 years anyway. This will be needed simply in order to kick-start the transition to ultra-low carbon, but currently much more expensive, production technologies – notably in the steel, cement and chemicals sectors.

However, we also see a risk that, by mixing anti-leakage policies with state aid for strategic low-carbon investments, the policy objectives of the respective mechanisms become confused, potentially leading to sub-optimal outcomes. For the sake of clarity of objective and ease of administration, it may therefore be preferable to separate different policies for different policy objectives.

For these reasons, Option 1a may be a simpler solution than Option 1b. However, the option to use state aid to replace a part of free allocation, while tying this to investment in abatement measures, could also be considered as a complementary measure, and should thus be evaluated accordingly.

However, it is important to note that both the options 1a and 1b described above would only be temporary. Even an expanded ETS would still need to see allocations decline to zero over time and therefore alternative leakage solutions would be needed. Thus, while these options could allow the EU to extend the current free allocation system of anti-leakage protection for a time, ultimately, an alternative long-term framework would need to be established that superseded these approaches.

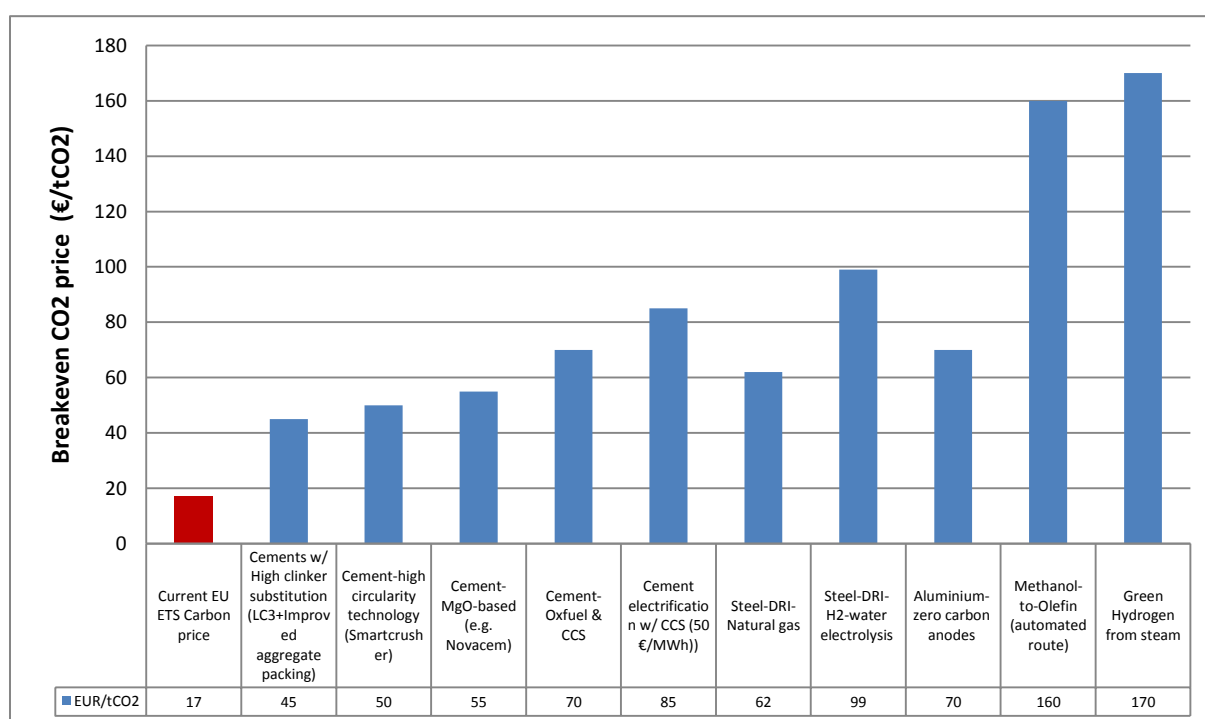
Option 2. Border Carbon Adjustments

In our view, the main advantage of border carbon adjustments over the alternatives is that they would work within the framework of the EU ETS and carbon pricing. This may be advantageous if one believes that a) BCAs are implementable for a broad range of sectors and b) that carbon pricing is the

primary policy mechanism by which energy intensive industries will be decarbonised, both in Europe and around the world.

However, both of these assumptions can be questioned. For example, carbon prices in the order of 100 to 200€/tCO₂ would be needed to make climate neutral industrial technologies viable from an economic perspective. However, such prices are currently unlikely and politically unfeasible, in Europe, but also in many of the EU's trading partners. BCAs therefore do not address the more fundamental issue which is that different policies (not only carbon pricing) with different implicit (shadow) carbon prices will be needed to decarbonise industry in Europe itself, let alone abroad. Consequently, the justification that "BCAs allow the EU to raise carbon prices and thus decarbonise industry" is not accurate in our view.

Figure 4. Comparison of current EU ETS carbon price with the breakeven CO₂ prices for key industrial decarbonisation technologies in cement, steel and chemicals sectors



Another significant drawback of BCAs is that they come with a range of significant political, legal and administrative risks that would need to be resolved.

Some of these problems may be resolvable, although they would have important implications for the design of the policy instrument. For instance, some of the administrative complexity of assessing CO₂ content may be able to be reduced by applying uniform default CO₂ benchmarks for products coming into the EU, while allowing companies beating the benchmark to certify their production as having a lower CO₂ intensity, and thus paying a lower charge. However, while this would reduce the complexity of the system, it would raise political issues about where to set the benchmark. For example, what would be a fair European benchmark considering potentially less modern plants in some countries than in others around Europe? And how would this be reconciled with what foreign

countries think is a fair set of benchmarks? Would these answers be consistent with the goal of reducing administrative complexity?

Similarly, an effective and politically implementable border adjustment would, in our view, require that some form of rebate be given to protect exported energy intensive goods from the EU. It is uncertain whether this would be WTO-compatible. One solution to this eventually would be if free allocation were continued to companies only for the share of their production exported. (This would after all, simply be a continuation of the existing system, which has not been opposed at the WTO after 15 years of the ETS.) However, this would imply that a system for tracing exports back to original producers be established.

However, not all of the challenges raised by BCAs have such obvious solutions. For example, one significant risk is that third countries undermine the effectiveness of the system by engaging in so-called “resource shuffling” of their exported products. Resource shuffling might take three forms:

1. Where a country would keep its more carbon intensive production for domestic use, while exporting only its cleanest production to Europe.
2. Where a country might export its goods first to a country with lower CO₂ intensity, and then ship them to Europe from this country, in the hope of benefiting from a reduced CO₂ intensity assessment.
3. Where sectors with complex downstream value chains, such as steel or chemicals, could cease exporting CO₂ intensive basic materials to Europe (e.g. steel coils) and instead switch to producing a larger share of the value chain in the non-EU country, before exporting the more complex downstream products (e.g. car doors).

Resource shuffling is likely to be a real risk for other highly traded products, such as steel, aluminium or basic chemicals. In general, the best way for the EU to avoid resource shuffling from undermining the BCA’s effectiveness would be to:

- a) Ensure that its domestic production was already world’s best performance in terms of CO₂ intensity,
- b) Include as many downstream products as were administratively feasible in the scope of the system,
- c) Use common global benchmarks for the default CO₂ intensity/product (i.e. not distinguish between countries based on true CO₂ intensity) and ensure effective 3rd party verification of product origin where goods sought to claim superior CO₂ performance to that benchmark.

A problem for the EU is that condition a) is not likely to be satisfied for some time (e.g. for steel or chemicals). These considerations suggest that an EU BCA would need to either focus very narrowly on certain products that the EU thinks are less likely to be subject to resource shuffling concerns, or else delay implementation until its domestic production can be significantly decarbonised.

However, in our view, the most significant risks to the implementation of BCAs stem from the significant political challenges that are raised by the mechanism, both internationally and domestically. Internationally, trading partners, such as China or India, either with higher CO₂ intensity than the EU average, or who fear creating a precedent for “environmental protectionism”, will object. There is also potential for countries to object or retaliate to the EU’s move in bad faith, as

a way of seeking leverage in climate or other negotiations, or as a purely populist gesture. Furthermore, technical challenges such as where to set benchmarks, or how to impute foreign countries' domestic carbon regulations into the setting of the border adjustments, might be a cause of dispute and require negotiation.

The EU would be best placed to withstand these significant challenges where it is confident that it can avoid international isolation and internal division. These conditions are not currently aligned. Ideally the EU would be pursuing any BCA by first laying the necessary diplomatic and technical groundwork. Where possible the EU should use the next 5 years to forge agreement on principles for the cooperation on both the decarbonisation and carbon leakage protection of energy intensive industries as part of an international climate coalition. This might be established by beginning first with its other carbon pricing nations and provinces, and as part of the EU's regional neighbourhood discussions.

Domestically, a key challenge will be to implement a BCA that removes free allocation, and thus exposed producers to the full carbon price. This will be opposed wherever domestic production is not yet at the level of the global best performers. This is the case for several EU sectors, and performance varies across EU member states.

Secondly, some domestic sectors unrelated to the EU ETS may be concerned about the possible impact of retaliation. Thirdly, some sectors may object to a BCA that included their sector, but reserved free allocation to others with whom their products are in competition (e.g. steel vs cement).

Finally, the removal of free allocation associated with BCAs would also mean that prices in downstream purchasers of energy intensive products would rise. In the long run this is unavoidable under all solutions to the carbon leakage problem. However, any BCA design with a hope of being adopted would need to address these political economy considerations in a robust manner.

In view of the significant technical and political risks cited above, we believe that border carbon adjustments will be very challenging for the EU to implement unilaterally at the present time for all but a small number of less traded sectors. Moreover, the EU needs more than just higher carbon prices to decarbonise energy-intensive industry, it needs complementary policies, implying a range of different (shadow) CO₂ prices in the economy for energy-intensive sectors. It also needs significant efforts to develop infrastructure and lead markets for green products. Therefore, pursuing BCAs in the current context creates a significant risk of undermining and distracting from the larger and more urgent need for a policy package for the decarbonisation of EU energy intensive industries.

Option 3. ETS-linked Consumption-charges for EII products (plus free allocation)

A third option consists of an approach based on consumption charges³. Under this approach, output-based free allocation would be provided to ETS installations indefinitely. This would provide protection from leakage. However, to restore a carbon price signal along the value chain, a

³ Neuhoff, K (2020) Border Carbon Adjustments and Alternative Measures for the EU ETS An Evaluation https://www.diw.de/documents/publikationen/73/diw_01.c.743698.de/dp1855.pdf

consumption charge would be applied to all energy-intensive materials once they left the “factory gate” of the ETS installations. The liability for this charge could be passed on down the value chain until either paid by an intermediate producer or the final consumer. The charge would be determined using the following stylized calculation:

Consumption charge = EU ETS price x the benchmark product CO₂ intensity x weight of the materials.

The charge would be applied to importers of the relevant products, once the goods were on-sold in the EU market, and removed for exports. Thus, upstream producers would be fully protected at the level of the ETS benchmark. A level playing field would be established between the embedded carbon price in imports, domestic production and an exception applied to exports.

An important advantage of this approach is that, since the charge only applies once it enters the consumption sphere for use of EII products, it is not strictly speaking a border measure. Rather it concerns the regulation of the EU’s internal market. Similar systems already exist for excise charges applied to fuels, tobacco and alcohol in the EU. They are thus administratively feasible and there are precedents suggesting that they would be WTO-compatible, including for the removal of the liability for export. The fact that the charge would be based on the weight of materials (e.g. of steel, aluminium, plastics, etc.) in the product is also intended to simplify the monitoring reporting and verification required for implementation.

However, while a consumption-based approach has a certain appeal, it would unfortunately come with several challenging issues that would require resolution. Firstly, applying a purely weight-based charge would fail to reward businesses (consumers) for producing (consuming) low CO₂ products. This would also include recycled and circular products, which would be treated as equivalent in CO₂ intensity to primary products. One possible response to this problem might be to allow the installations to sell their excess free allocations on the carbon market, in order to lower their downstream costs. Nonetheless, this would only work so long as free allocation was sustainable...

Secondly, this system would imply allocating free allocation in perpetuity in order to protect upstream installations in the ETS and to avoid downstream producers and consumers being charged twice for the CO₂ content of the products they buy. This raises challenging questions about how a declining ETS cap could be recycled with perpetual free allocation at 100% of the benchmark:

- When and how would free allocation be phased out?
- Would these sectors ultimately need to be removed from the ETS?
- How would the objective of climate neutrality be maintained for these sectors if free allocation was to be continued until 2040 or perhaps 2050? Etc.

Ultimately, therefore, ETS-linked consumption charges might only be able to be a temporary measure to address carbon leakage. In their defence, they could nonetheless potentially be transitioned to carbon product standards or BCAs at a later date, since much of the institutional and MRV architecture would be similar. However, this would imply significant administrative effort to change the current system for only a short-lived solution.

Thirdly, as a tax-like measure, an ETS-linked consumption charge would likely require unanimity in the European Council in order to be adopted. This raises questions about whether it is politically realistic to consider such an approach.

For the above reasons, we believe that an EU ETS-linked consumption charge system also faces challenges to implement, while maintaining a functioning and manageable EU ETS as well as effective incentives for decarbonisation of energy intensive sectors in the EU ETS. In principle, this option could be implemented as a temporary solution on the way to carbon product standards (see Option 4 below). However, doing so may involve significant effort for only temporary utility.

Option 4. Carbon product standards (for all sales in the EU)

A third alternative to the anti-leakage options listed above is carbon product standards (CPS).

Under this option, the EU would set a sunset date – e.g. by 2035 or 2040 – for all EU installations producing energy intensive goods such as steel, cement or basic chemicals, to meet climate neutrality-compatible, CO₂ performance standards. **From the sunset date onwards, all sales of carbon-intensive basic materials (and chemicals) in the EU, would need to be certified that were produced in line with these standards. The rules would apply both to imported goods for sale in the EU as well as domestically produced goods.** Both types of goods would require certification by approved certifiers (as is currently done under the EU Timber legislation⁴). Exported products would be exempted, unless corresponding international standards applied.

In the intervening time, the EU would continue – on a temporary basis – to provide free allocation along the lines of Option 1b described above. In other words, free allocation would be given at the full conventional technology benchmark, but, each year, an increasing share of installations would be given aid to invest in climate neutral production processes instead of free allocation. Thus, the EU and its member states would in effect be creating the economic conditions and technological capacity for energy intensive industrials to meet ambitious climate neutrality standards by the sunset date. The EU would clearly signal to ETS installations that their free allocation would end completely as of the sunset date, from which standards would apply.

In our view, a gradual transition to climate neutral product standards in this manner presents a number of significant advantages over the alternatives:

- The continuation of free allocation in the short term would require relatively little change to the existing system, while allowing attention to be focused on enabling the actual decarbonisation of EU industrial assets – i.e. the most urgent priority during the next decade.
- Reduced potential conflicts with WTO law, provided certain basic conditions of non-discrimination and consultation were met (Gerres et al, 2019)⁵.

⁴ Cf. The Forest Law Enforcement, Governance and Trade Voluntary Partnership Agreements (FLEGT VPAs) and the EU Timber Regulation (No 995/2010). The latter applies to timber imported from countries without a FLEGT VPA in place. This Regulation forbids placing illegally harvested timber and products derived from such timber on the EU market. https://ec.europa.eu/environment/forests/timber_regulation.htm

⁵ Gerres, Timo; Haussner, Manuel; Neuhoﬀ, Karsten; Pirlot, Alice (2019) Working Paper: Can government ban materials with large carbon footprint? Legal and administrative assessment of product carbon requirements DIW Discussion Papers, No. 1834 <https://www.econstor.eu/bitstream/10419/209641/1/1685832741.pdf>

- A simplified MRV process - exact carbon emissions for each good would not need to be known – a simple threshold test would be applied.
- The policy could begin with the establishment of labelling measures, thus allowing the policy infrastructure to be developed and improved with time on the EU's side.
- No risk of resource shuffling or undermining EU competitiveness, since EU installations would already be at the performance standard.
- Setting a clear objective and vision for the decarbonisation of EU industrial production by 2035-40 would provide investor clarity on what they can and cannot invest in during the next 10 years.

While we believe that an approach based on carbon product standards is the best option of those available, it would nonetheless raise some issues that would need resolving.

First, product standards for steel, aluminium, ceramic and brick, glass, pulp and paper and also basic bulk chemicals are likely to be possible to set at ambitious climate neutrality-compatible levels (i.e. with emissions at or close to zero for the entire sector). However, for some products, such as cement or lime production, it may be more complicated to set a uniform standard that is both ambitious enough for the sector as a whole to be climate neutrality compatible, while accurately reflecting the potential of each specific member state or site to abate. This would suggest that sectors such as cement may need to maintain carbon pricing-based incentives to go beyond the minimum standard for the sector. Such a system would therefore not necessarily completely replace the ETS.

Secondly, for products which are in competition with each other, such as steel and cement, or steel and aluminium, standards would need to be set at comparable levels of ambition, in order to ensure a level playing field, and policy consistency, between sectors. Where possible, this might be done by setting similar emissions reduction goals (e.g. zero emissions/tonne) and then letting the cheaper climate neutral product have a competitive advantage in competing applications. Alternatively, this may be done by using a common shadow CO₂ price, e.g. of 100-150€/tCO₂, and determining standards based on the best available technology at that price.

Thirdly, sectoral emissions performance standards could probably be set today based on existing technological knowledge and modelling conducted for the EU's long-term strategic vision for a climate neutral economy. However, the exact sunset date and level of the standards would need to be reviewed and updated prior to taking effect, to take stock of the latest available knowledge. Reviews in 2025, 2030 might therefore be needed. Even if deadlines or the exact level of standards were adjusted over time, care would be needed to create expensive stranded, non-climate neutrality compatible assets.

Finally, as in the case of BCAs, product standards have the potential to create winners and losers beyond the EU's borders. As in the case of border adjustments, setting standards would require the EU to provide adequate forewarning and consultation of WTO partners in order not to be perceived as de facto discrimination under WTO law. As in the case of BCAs, we believe that the EU would be wise to pursue forms of international cooperation, including coalitions of nations engaging in carbon pricing. This could help to prepare the diplomatic ground for the implementation of such a policy, even if ultimately the EU should reserve the right to act on its own.

On balance, we believe that the most desirable, and effective, approach to provide medium and long-term carbon leakage protection is to pursue carbon product standards.

4. Conclusions

The EU discussion on anti-carbon leakage measures must not be allowed to distract from or undermine the broader and extremely urgent objective of putting energy intensive industry onto a pathway towards climate neutrality by 2050. This risk is very high if the EU pursues border levelling of CO₂ prices as the only solution to carbon leakage, especially in the present political and economic context.

We believe BCAs, if pursued in isolation to other solutions, and unilaterally by the EU, would encounter substantial domestic and international political opposition. **This risk is currently unnecessary to take at the present moment:** the current system of benchmark based free allocation can, with reforms linked to an extension of the ETS scope and perhaps complementary state aid policies for industry to decarbonise, be reformed to function effectively until at least the mid-2030s.

However, in the long-term – i.e. sometime between 2035 and 2040 - the system of free allocation will become unsustainable, as free allocation would consume 100% or more of total EU ETS cap. Even if decarbonised in future, climate neutral EU industries will still face higher production costs than conventional technologies. By this time, the EU will therefore need to shift to a longer-term solution than free allocation.

The EU will therefore need to choose between one or some combination of three basic long-term alternatives. Since Border carbon adjustments are not an end in themselves, and since there may be scope to combine different options over time and across sectors, the Commission should explore other options, as well as ways that they might be combined, as part of an effective long term strategy.

In our view, the approach with the most desirable characteristics from a WTO legal, administrative simplicity, and political-economy perspective would be for the EU to announce and then pursue a transition to climate-neutral carbon product standards for energy intensive basic materials (also applied to imported products). This would require some of the certification and MRV infrastructure of BCAs, but would also come with a range of advantages in terms of administrative and legal simplicity, communication, and effectiveness for investment in climate neutral technologies.

Climate-neutral product standards could be set based on existing technological knowledge and enter into force between 2035-40, thus providing clarity for industrial investment today and replacing free allocation from that date.

Whether it opts for carbon product standards, BCAs, or ETS-linked consumption charges, or some combination thereof, the EU will still need to develop MRV and certification systems. It will also need to work with international trading partners to prepare the diplomatic and technical groundwork, for long-term anti-leakage solutions to be implemented. **This technical and diplomatic work represent “no regret” measures that the EU could and must undertake during the next 5 years.**

