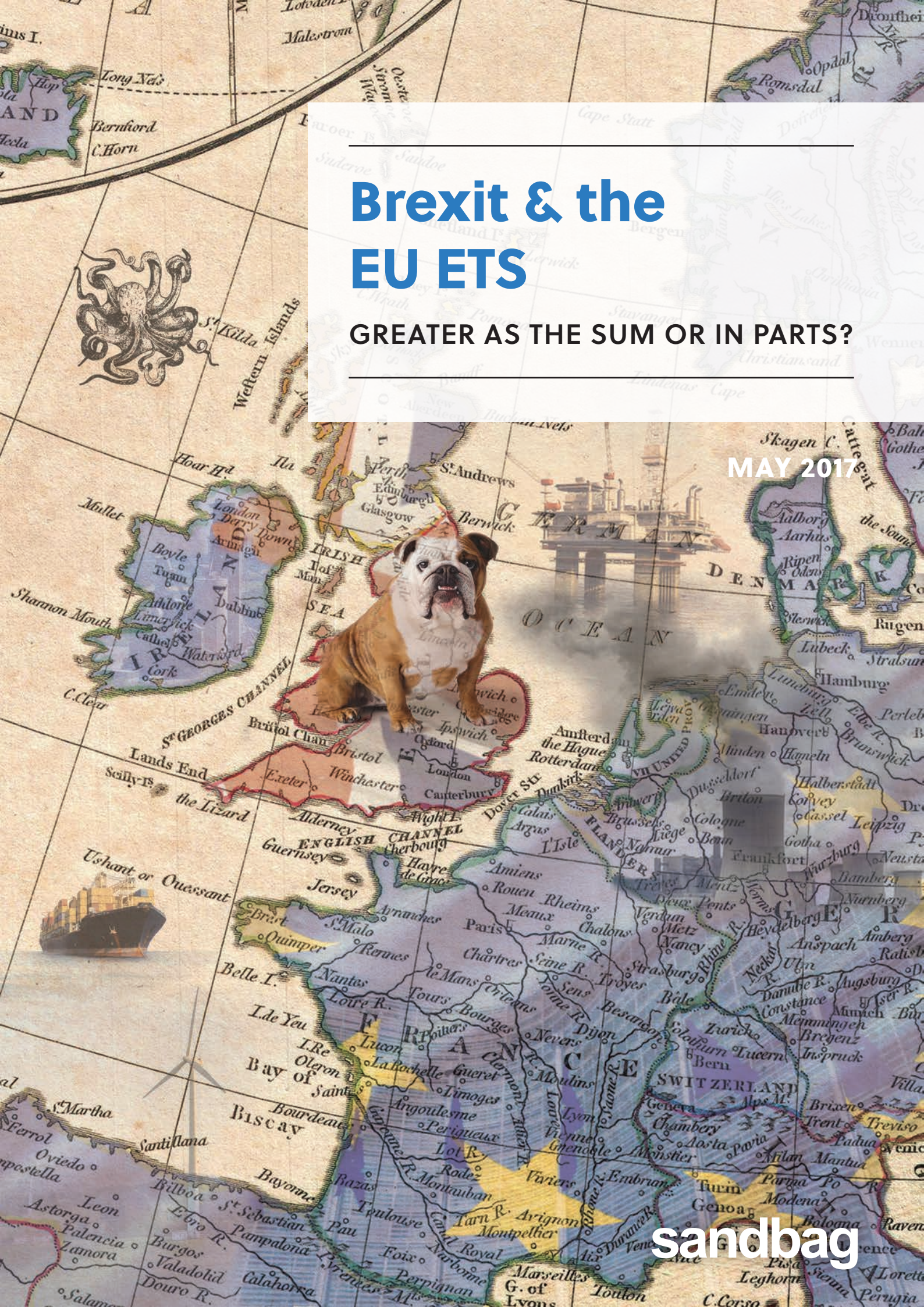

Brexit & the EU ETS

GREATER AS THE SUM OR IN PARTS?

MAY 2017



Summary and recommendations

1. Whether the UK should leave the EU ETS is a complex question. The answer is likely to be a matter of political choice – Sandbag’s analysis has highlighted the absence of a clear-cut solution.

- The UK staying in or leaving the EU ETS could have a range of effects, many of which depend on future policy choices by both the UK and the EU. We note that there are potential administrative and political difficulties for the UK to remain part of the EU ETS under the UK Government’s current approach to Brexit, which among other things seeks to exit the single market (which all current system members also belong to) and avoid jurisdiction of the European Court of Justice.

2. The departure of the UK would tighten the supply-demand balance in the remaining EU ETS, provided the EU27 adjusts the cap appropriately, though the eventual effects of this would likely be small

- If the EU27 retains its current percentage target reductions any UK departure will lead to the EU ETS having a somewhat tighter supply-demand balance. This is because excluding the UK will lead to a reduction in the cap greater than the reduction in emissions. We estimate this tightening as 745 million tonnes over Phase 4, or about 5% of the total Phase 4 cap.
- However, the net tightening effect will be quite small in relation to the size of the market. The counterfactual situation, i.e. UK remaining, will create additional surplus which will largely be absorbed by the Market Stability Reserve (MSR). It will then either be cancelled in the event that current Council proposals are adopted, or remain in the MSR throughout Phase 4 and beyond if there is no cancellation. By the time the market returns to scarcity, the difference in the supply/demand balance with or without the UK will be small. We estimate that the difference in the surplus at the end of Phase 4 will be only around 230 million tonnes (about 1.5% of the total Phase 4 cap). The rest of the additional surplus with the UK present will be absorbed by the MSR.
- Correspondingly, allowance prices will likely be only slightly higher and emissions only slightly lower for the remaining EU27 if the UK leaves the EU ETS. We estimate indicatively a reduction of emissions due to higher prices of less than 100 million tonnes (0.7% of the total cap) over Phase 4.

3. It is essential that the EU ETS reform is strengthened regardless of whether the UK is a participant

- None of the potential changes associated with UK departure from the EU ETS acts as a substitute for continued EU ETS reform. It is essential that the currently proposed reforms of the EU ETS, especially the limit on the size of the Market Stability Reserve, are retained and strengthened in future.

About Sandbag

Sandbag is a London and Brussels-based not-for-profit think tank conducting research and campaigning for environmentally effective climate policies.

Our research focus includes reforming the EU Emissions Trading System and the Effort Sharing Decision; accelerating the phase-out of old coal in Europe; deep decarbonisation of industry through technologies including Carbon Capture & Storage.

For more information, visit sandbag.org.uk or email us at info@sandbag.org.uk

- If the UK leaves the EU ETS it is essential that the remaining EU27 at least retain their percentage reduction targets, including the 43% reduction from 2005 levels by 2030, in line with 2014 European Council Conclusions and the EU's 2050 commitment.

4. UK departure from the EU ETS would open up policy choices, where there would be a great deal of scope for UK innovation; the actual impact on the UK of departure would be driven largely by these choices rather than directly by the fact of leaving

- The UK's emissions trajectory will continue to be largely driven by the requirements of the Climate Change Act, so will not necessarily be directly affected by the departure from the EU ETS.
- The UK and EU both have their own targets. A UK departure from the EU ETS would align the jurisdictions of targets with the jurisdictions of instruments to achieve those, potentially making it easier to design effective policy measures for achieving those targets.
- Departure from the EU ETS would provide the opportunity for the UK to introduce new or modified policies. It is essential as part of this that policies to achieve carbon budgets are strengthened.
- The basis of accounting for emissions from the traded sectors as part of carbon budgets under the Climate Change Act will need to change from allocated allowances to actual emissions if the UK leaves the EU ETS. Such a change will be desirable even if the UK remains part of the EU ETS.
- In the short term the UK could modify its existing policies for the traded sector, for example modifying carbon price support and the climate change levy.
- In the medium to long term the UK could introduce a UK ETS with wide scope and an adequate floor price, supported by complementary policies and potentially linkage to other systems. An independent UK system would be large enough to be viable on its own. The cap for a system with broad coverage could give effect to a substantial part of carbon budgets. This combination of legally-binding budgets with implementation in the form of a cap with trading, supported by complementary policies, would represent international best practice and as such reinforce UK leadership in the area of climate policy.

5. If the UK leaves the EU ETS, linking any new UK system back into it should be avoided or strictly limited while the EU ETS remains oversupplied

- Full linkage of any UK ETS to the EU ETS will not be desirable while the EU ETS remains substantially in surplus, which is likely to be for at least another ten years, because it would risk the UK buying EUAs without there being a corresponding effect on emissions covered by the system ("buying hot air").
- Limited one-way linkage, with EUAs used to comply with obligations under UK legislation, may have some advantages. It could be adopted whether the UK has a trading system or a tax, and may be possible without a formal agreement. Such linkage may desirably be restricted to certain sectors, such as those at risk of carbon leakage.

6. Any changes should be timed to minimise associated disruption

- If the UK does leave the EU ETS, there are advantages to aligning departure with the end of Phase 3 (2020) to minimise disruption for both UK and EU entities. This implies transitional arrangements will be required for about two years.

7. The effects on international carbon markets will depend on how subsequent UK action is perceived

- If the UK departs the EU ETS and subsequently pursues vigorous innovative policies, it may provide valuable models from which others can learn. This would consolidate the success and leadership demonstrated by policies such as the Climate Change Act and the carbon floor price.

Recommendations

Sandbag recommends the following:

- It would be essential in the event of UK departure that the cap is adjusted to give the same percentage reduction for the remaining EU27 as is currently intended for the EU28.
- If the UK does leave the EU ETS it should use the opportunity to put in place an innovative set of policy measures to achieve its carbon budgets optimally, and so continue its international leadership in the area of climate policy. This should include maintaining a strong carbon price.
- If the UK leaves, it should not link to the EU ETS while the system remains oversupplied, except potentially for limited one way linkage for sectors at risk of carbon leakage.
- Whether or not the UK remains part of the EU ETS:
 - (i) The EU should continue to reform the EU ETS, including adopting an effective size limit on the Market Stability Reserve as part of the current reform package.
 - (ii) The UK should change the way in which emissions from the (currently) traded sector are accounted for under the Climate Change Act, by amending the Carbon Accounting Regulations so that actual UK emissions are used as the basis for setting and measuring performance against carbon budgets.

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1. Introduction

This report looks at:

- the options for the UK remaining in or leaving the EU ETS,
- implications of each option for the EU27, the UK, and wider carbon markets.

In doing so it considers how the circumstances of the EU ETS, including the current oversupply of allowances, affect outcomes.

This report focusses on medium and longer term issues. It does not look in detail at transitional issues.

Timing of any changes

For the purposes of this analysis we assume that any changes are implemented at the end of Phase 3 of the EU ETS. UK departure from the EU ETS before the end of Phase 3 would be complex, and extending membership to the end of the phase would make departure more tractable.

Phase 3 of the EU ETS ends on 31st December 2020 but the annual compliance cycle is only completed in April 2021. The UK's departure from the EU is due in March 2019. Assuming this is carried through, there will be slightly over two years from the UK's departure from the EU to end of Phase 3. Any transitional arrangements to cover the period until the end of Phase 3 would thus be within the European Parliament's specified time allowed for transitional arrangements of up to 3 years. However, establishing transitional arrangements will still not be straightforward.

The final form of the Directive for Phase 4 currently in trilogue

The implications of the various options for the UK's relationship with the EU ETS depend on the state of the EU ETS. The current form of the Directive governing Phase 4 remains under review. We have made the following assumptions, which reflect current proposals from Council.

- **The size limit on the MSR.** We have assumed a 700Mt limit on the volume, broadly in line with the Council proposal to limit the MSR to the previous year's auctioning volumes¹. We have examined a sensitivity to this not being implemented. We find under this sensitivity that our conclusions to 2030 are largely unaffected, with the size of the MSR simply increasing, because allowances do not begin to return from the MSR until the very end of the period in any case. However, the reform of the MSR remains very important to longer term stability of the system so it is crucial that this is maintained. This is even more important in the event of UK departure, as the existing surplus is larger as a proportion of the remaining market.
- **The rate of transfer to the MSR.** We have assumed a doubling of the rate for 5 years from 2019, as included in the Council proposal.
- **Unallocated allowances from Phase 3, including UK allowances.** We have assumed the Council proposal is implemented so that 470Mt from Phase 3 (415Mt excluding the UK share) is carried over into Phase 4 without going into the MSR, and released in equal annual instalments over Phase 4.
- **Unallocated UK allowances and the UK share of backloaded allowances.** We have assumed that any UK allowances left over, including backloaded volumes and those earmarked for the Phase 4 NER, will be released into the market in 2020. A case where they are placed in the MSR is also assessed.

¹ [EU Council General Approach](#)

None of these proposals is sufficient to remove the oversupply of allowances in the EU ETS, so any changes will be implemented in the context of likely continuing oversupply and low prices over the next several years at least. Adequate reforms to address oversupply have not been adopted as part of the current reform process (see previous Sandbag reports). Further reforms to improve the supply-demand balance seem likely to be more difficult to achieve with the UK no longer a member of the EU, because the UK has been amongst the most active advocates of reform.

We note that the timing of any departure and the status of the EU ETS are both acknowledged elsewhere as important considerations in assessing options. For example, in its recent report the House of Commons Business, Energy and Industrial Strategy Committee recommended that:

“... the Government seeks to retain membership of the EU ETS until at least end of Phase III in 2020, and that it seeks to negotiate longer term membership of the EU ETS on the condition of commitment to future reform. If sufficient reforms to the EU ETS do not appear achievable, we recommend that the Government considers alternative options, such as establishing a separate UK system linked with wider international systems.”²

² <https://www.publications.parliament.uk/pa/cm201617/cmselect/cmbeis/909/909.pdf>

2. Options for the UK's relationship with the EU ETS

There is a spectrum of possibilities for the UK's future relationship with the EU ETS, ranging from continued membership, through to linking, or to full separation. Table 1 summarises six main Options we have identified, although each of these has variants. Most Options appear achievable in principle with sufficient political will, but it is not clear if this political will can be found for all of them. This will depend among other things on the status of the wider negotiations, and this may in practice have a large influence on which Option is eventually selected.

Those Options shaded in blue indicate that the UK remains part of the EU ETS, with the UK still auctioning and allocating EUAs, which remain the "common currency" of the trading system. This may resemble arrangements for the European Economic Area countries (EEA), such as Norway, currently included in the ETS. Those options shaded in turquoise are where the UK is linked to the EU ETS in some form. The final option (shaded in green) is complete separation of the UK and EU ETS.

Under Options 1 and 2 there will be no direct change to the EU ETS cap. However, in the long term the absence of a UK vote may lead to weaker caps than with its inclusion, because the UK has been one of the most progressive member states in seeking tighter caps. This would be a particular risk beyond 2030, but it may also be realised if there is a review of the cap before this.

Under Options 3-6 there would need to be a revision of the EU ETS cap to recognise that the UK is no longer included.

Each of the options is described further below the table. Case studies of linkages between different emissions trading systems are provided in separate annexes available on the Sandbag website.

Table 1: Options for the relationship between the UK and EU ETS

Option	Notes	New cap?
1. UK remains part of the system	<ul style="list-style-type: none"> This may be difficult or impossible depending on the form of the wider arrangements for Brexit UK Government not accepting jurisdiction of the European Court of Justice may be difficult 	No
2. Linking remaining close to full membership (“Norwegian model”)	<ul style="list-style-type: none"> The UK would continue to issue EUAs under an agreement This would resemble the arrangements for EEA countries (Norway/ Iceland/Liechtenstein) 	
3. Linking with a UK emissions trading system (“Swiss model” or “Western Climate Initiative model”)	<ul style="list-style-type: none"> The UK would need to establish its own ETS. This Option would be analogous to the Swiss model, most likely with mutual recognition of each other’s allowances Linking would likely be contentious if the coverage of any UK ETS is dissimilar 	Yes
4. One-way linkage: Allowing EUAs as compliance in a UK carbon pricing system up to a limited percentage (previously proposed “Australia model” or “early Norwegian model”)	<ul style="list-style-type: none"> This may not require formal agreement by the EU27 It could be part of broader use of offsets and other systems’ allowances Involves transfer of funds from UK to EU which may be politically challenging for the UK Would not require a UK ETS as similar arrangements could apply under a tax 	
5. One-way linkage with limited scope , restricted to certain sectors (e.g. those on carbon leakage list)	<ul style="list-style-type: none"> This would be similar to Option 4 with the difference that it would only involve some sectors such as those on the carbon leakage list, allowing them to comply with their obligations by surrendering EUAs. This may be in the form of a requirement to purchase above a benchmark Reduces competitiveness concerns, so may reduce concerns about transfer of funds to the EU 	
6. Complete departure	<ul style="list-style-type: none"> The UK separates from the EU ETS with no linkage 	Yes

Option 1: UK remains part of EU ETS

Under this Option the UK would participate in the EU ETS but likely have little influence over its future form. The cap would be set by the EU, with the Commission and other EU institutions deciding rules in line with EU overarching targets. Other aspects of the arrangement would need to be defined, in particular whether the UK would continue to have access to funds such as the New Entrant Reserve and the Innovation Fund. The UK would likely remain under the jurisdiction of the European Court of Justice (CJEU).

This Option may be difficult or impossible to achieve, depending on the form of the wider arrangements for Brexit. It would at least cause political difficulties given the UK's stated preferences for the form of departure, which includes leaving the single market and not accepting the jurisdiction of the European Court of Justice.

However, it is possible that this Option could form part of a broader set of arrangements ("umbrella agreement"), for example covering networks and interconnections in energy and other fields such as telecoms. Limited jurisdiction of the CJEU and other institutions may be accepted in these sectors to gain the benefits of linking systems and networks.

Option 2: UK remains under EU ETS cap ("Norwegian model")

The UK could effectively remain part of the EU ETS by following the approach adopted by the European Economic Area (EEA) countries (Norway, Iceland and Liechtenstein). On 26 October 2007, the Joint Committee of the EEA agreed to incorporate the Emissions Trading Directive 2003/87/EC and a number of implementing provisions into the Agreement on the EEA. This decision entered into force on 29 December 2007 following parliamentary approval from the EEA states.³

The decision by the UK Government to leave the single market makes an EEA-style model more difficult. EEA countries are all part of the single market, and the EU may be less willing to extend membership to an external country. For example, attempts to amend provisions on the free movement of people have presented a difficulty for linkage with the Swiss system, even though it is intended to be less closely linked than the EEA countries.

The form of jurisdiction would also need to be addressed. CJEU jurisdiction does not seem to be required, since neither EEA countries nor Switzerland are under its jurisdiction⁴. However, some form of dispute resolution framework is likely to be required, which may indirectly require acceptance of CJEU rulings.

Any sort of linking to a UK system would likely raise different issues than the existing links to the EU ETS as the scale of the UK's emissions would be much larger relative to the cap. Over the whole of Phase 4, the UK would account for about 11.6% of the cap, compared with 1.2% and 0.3% for the EEA and Switzerland respectively.

Option 3: Two-way linkage ("Swiss model" or "WCI model")

A further model is for the UK to establish its own system, which is then linked to the EU ETS through an agreement which includes mutual acceptance of each other's allowances. This would resemble the linking negotiated between Switzerland and the EU ETS, and that in place between California, Quebec and Ontario under the Western Climate Initiative (WCI) in North America.

The linking agreement was agreed by Switzerland and the EU in late 2015 and early 2016. Negotiations started in 2011.⁵ Governance is more of an issue in Switzerland than for the EEA countries because while Switzerland is part of the European Free Trade Agreement (EFTA) it is not a member of the EEA, therefore it is not subject to ESA (EFTA Surveillance Authority) oversight or EFTA Court jurisdiction. If there is a dispute about trade relations between the Switzerland and the EU, the CJEU will initially publish its decision, and this decision will then go to a joint committee of Swiss and EU officials, which decides on how this issue should be viewed in the context of their bilateral relationship. It is not clear to what extent arrangements similar to this could be put in place for the UK.

³ [Norway, Phase 2 NAP](#)

⁴ <https://www.publications.parliament.uk/pa/ld201617/ldselect/ldcom/72/7208.htm>

⁵ [Swiss Environment Ministry](#)

The WCI originally linked California and Quebec, with Ontario now joining. Other US states and Canadian provinces have expressed an interest in linking. Mexico has indicated it has plans to establish its own carbon trading system and link to WCI by 2021⁶. Linkage has been facilitated by designing the systems in each jurisdiction with very similar features. The WCI itself, which is a non-profit corporation, provides administrative and technical services to support implementation of emissions trading systems.

Separate caps would need to be set for the UK and remaining EU27. This may delay linking even if the administrative aspects of linkage are easier to achieve because the UK is currently part of the system.

Option 4: One-way linkage (previously proposed “Australia model”)

Under this Option UK entities would be allowed to meet some proportion of their obligations by surrendering EUAs. They could be bought on the open market. Similar arrangements were in place during the early years of the Norwegian system, although Norway’s one-way link to the EU ETS did not result in extensive use of EU allowances because of an oversupply of Norwegian allowances⁷. Similarly, RGGI’s initial memorandum of understanding (MOU) allowed for a unilateral link to EU ETS allowance markets. Australia’s Carbon Pricing Mechanism planned to recognize allowances from the EU ETS from July 2015 to July 2018, after which it was anticipated that the relationship will become bilateral and trade could occur both ways. However the system was abolished before any linking took effect.

This Option would (unlike Option 3) not require a UK ETS to be introduced. The linkage would be there only to allow UK entities to meet their obligations, which could take another form. For example, EUAs could be surrendered instead of paying a carbon tax⁸.

In principle this option could be adopted unilaterally by the UK. However in practice there may be an imperative to reach agreement with the EU about what happens to surrendered allowances.

Option 5: Restricted one-way linkage

One-way linkage could be restricted by the UK to some sectors only, such as those at risk of carbon leakage. This could, for example, enable those sectors most at risk of carbon leakage to continue paying the same carbon price as they would under the EU ETS. The requirement to buy EUAs might only apply above a certain benchmark or threshold.

The volume of allowances bought under such an arrangement would not be a large proportion of the system (see 4.3).

Option 6: Complete separation

The UK could simply cease to be a part of the EU ETS. This is in many ways the most straightforward option, providing transitional arrangements can be put in place to allow departure at the end of Phase 3. However, it would still not be entirely straightforward. For example, decisions would need to be made about what should happen to unallocated allowances (see online annexes).

In the event of no deal being reached on continued UK membership of the EU ETS this would be the default outcome. The UK would cease to be subject to the EU ETS Directive on departure from the EU, and relevant UK

⁶ Carbon Pulse, 21st April 2017

⁷ Mehling, M. and E. Haites (2009). "Mechanisms for Linking Emissions Trading Systems." *Climate Policy* (Earthscan) 9: 169-184.

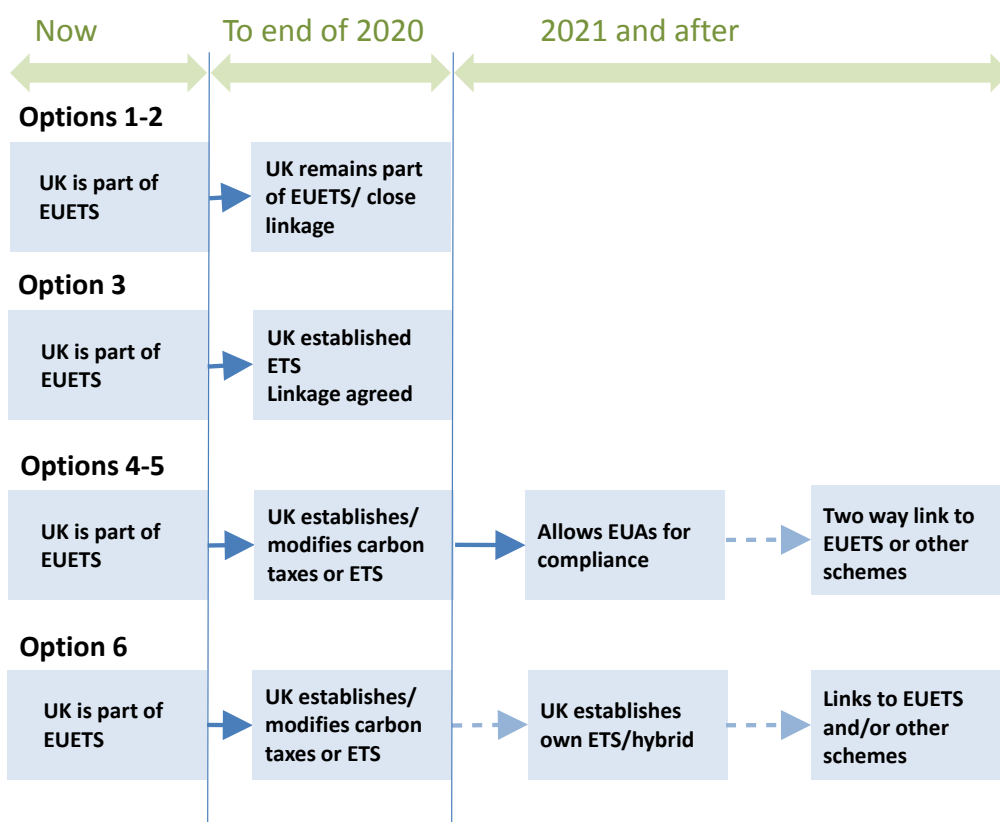
⁸ Indeed there is precedent from the Mexican and proposed South African taxes for use of offsets for compliance under a tax.

legislation would need to be repealed. The EU would have to adjust the terms of the relevant legislation, for example the cap, to recognise the absence of the UK.

Sequencing of options

Linkage need not be established immediately: there could be initial separation (Option 6) followed by subsequent linkage. Similarly, one-way linkage may be followed by two-way linkage, as happened with the Norwegian system and was planned for the Australian system. Some of the potential differences in sequencing are illustrated in Chart 1 below.

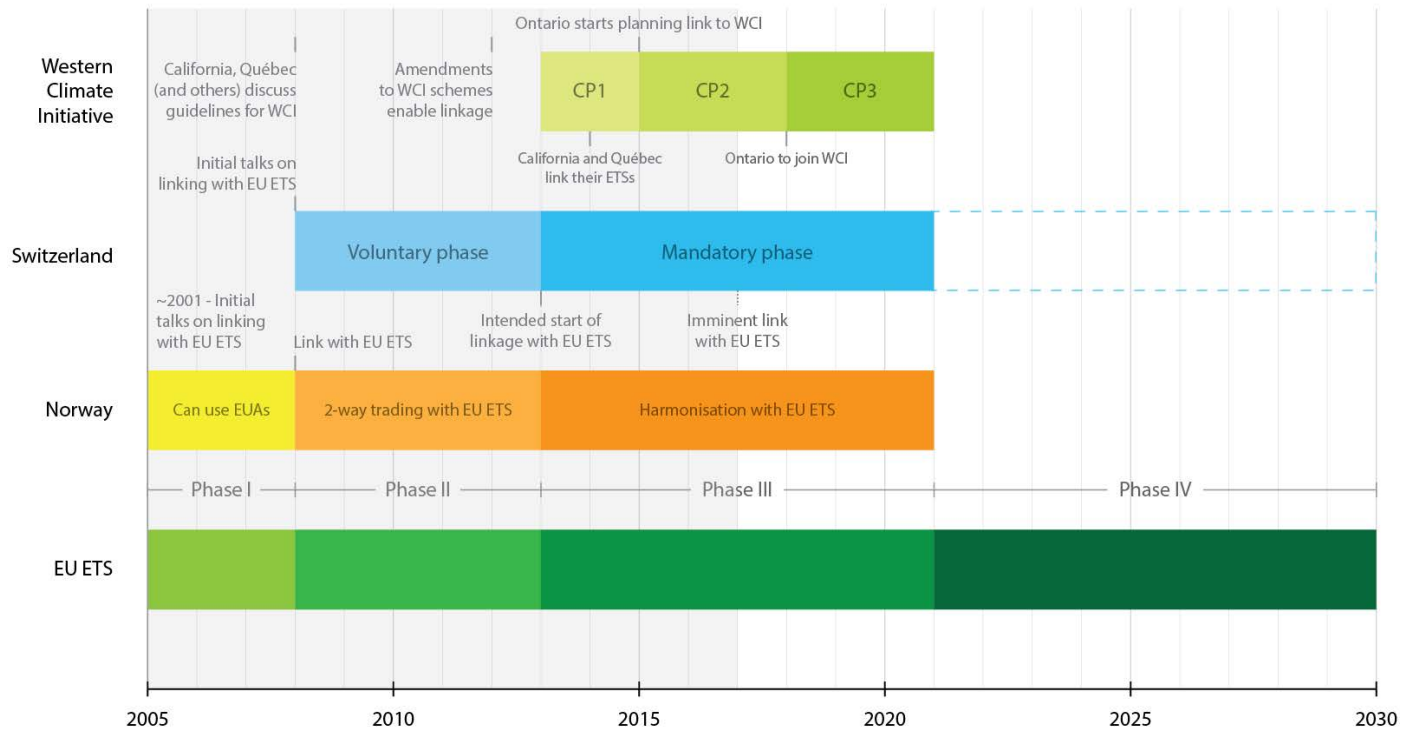
Chart 1: Sequencing of transitions under Options 1-6



Timescales for linking

Linking other systems to the EU ETS has taken some years in the past. This is illustrated in Chart 2 below. However, the UK is currently a member of the EU ETS so the administrative arrangements for participation are already in place, and the scope of installations to be covered is already defined. If political agreement on linkage can be reached, setting up the necessary administrative infrastructure for the UK should be much less time-consuming than it would otherwise be.

Chart 2: Timetable for existing linking of systems



3. Implications for EU ETS

3.1 Resetting the EU ETS cap

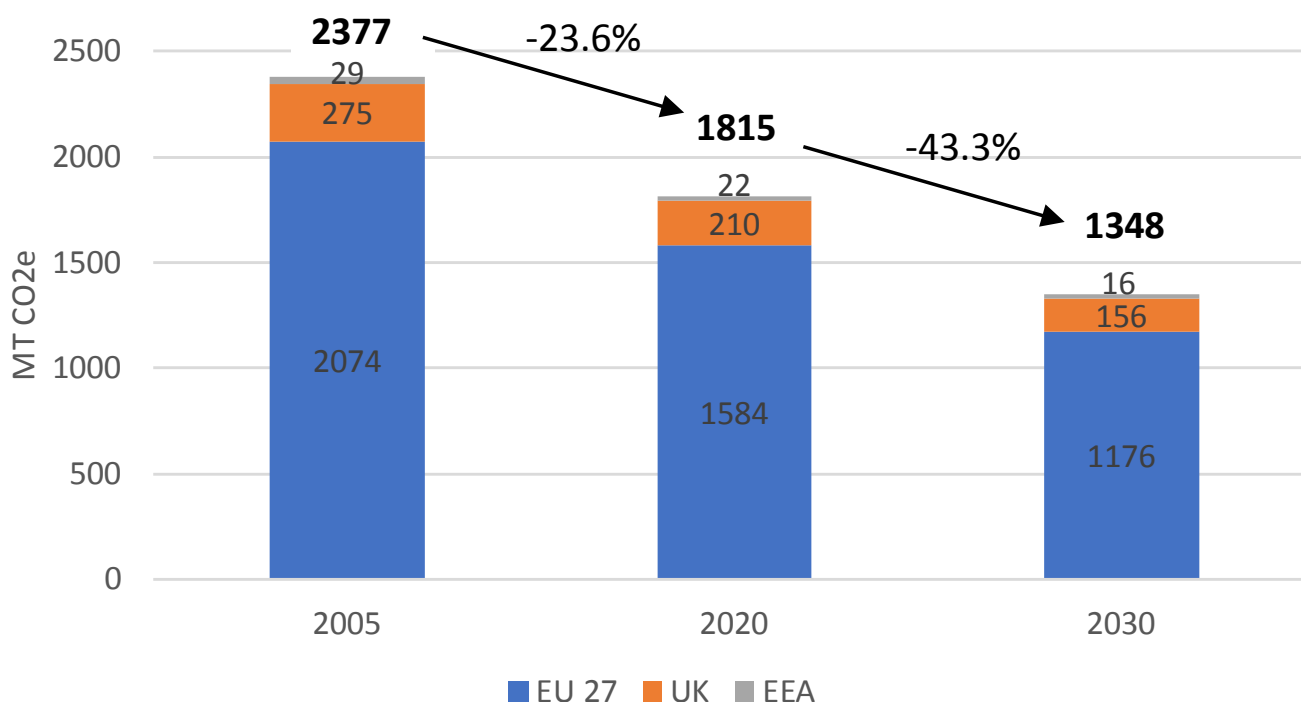
If the UK leaves the EU ETS the cap for the remaining EU27 will need to reset their cap⁹. We have calculated a new cap as follows.

1. Removing the UK from the EU ETS' 2005 baseline emissions total. In doing so we have taken into account all 2005 emissions consistent with the present scope of the EU ETS, which is wider than it was in 2005. We have done this for the UK, the remaining EU27 and the EEA countries.
2. Applying the same reductions to the EU27 portion of the cap as applies at present to the cap including the UK. The reduction for 2030 is set by the 2014 Council Conclusions.

This approach is illustrated in Chart 3.

⁹ There does not appear to be any formal requirement in the Directive to do so, but practically it seems highly unlikely that the cap would remain as it is in response to the departure of a major member.

Chart 3: The total cap and UK share with emissions reductions in line with 2014 Council Conclusions



Note: EU 27 ETS emissions in 2005 are calculated by removing UK emissions under the 2013 ETS scope from the total EU plus EEA States' amount under the same scope as published by the European Environment Agency¹⁰. This equals 2074Mt. We then calculate the respective caps for the EU 27 in 2020 and 2030. The 2020 reduction percentage was quoted as 21%, but this is under the Phase 2 scope of the EU ETS, which was extended in Phase 3. We do have the actual 2020 cap and can therefore calculate the actual reduction percentage from 2005 emissions under a constant scope. This is about 24%. The reduction percentage for 2030 as published by the EC is 43.3%. We therefore calculate EU27 targets of 1584Mt for 2020 and 1176Mt for 2030; both by definition represent the same percentage reductions as the EU28 targets.

This approach preserves the reduction commitments and ambition that have been agreed by the EU under the October 2014 Council Conclusions¹¹. The cap is assumed to be unchanged if the UK links to the EU ETS under Options 3-5.

We also examined a number of other bases for setting the revised cap (see online annexes). Some of these give similar results. One approach that would give different results is to subtract only the UK's annual allocation cap in 2020. This would give a higher cap in 2020, because the UK's actual allocation as a percentage of the Phase 3 cap was lower than its share of emissions in 2005. Applying the same linear reduction factor to the starting point would lead to a higher cap throughout the period.

This approach would be inconsistent with the 2014 Council Conclusions, because it would require a lower emissions reduction for the remaining EU27. This would fail to protect the integrity of the system. It therefore seems unlikely to be adopted, and it would be highly undesirable if it were. Clearly any failure to reset the cap at all would be much more problematic, but such an outcome seems unlikely.

¹⁰ [European Environment Agency Database](#)

¹¹ [October 2014 Council Conclusions](#)

We have therefore adopted the approach shown for the purposes of analysis and not examined other approaches further.

3.2 Trends in emissions under the EU ETS

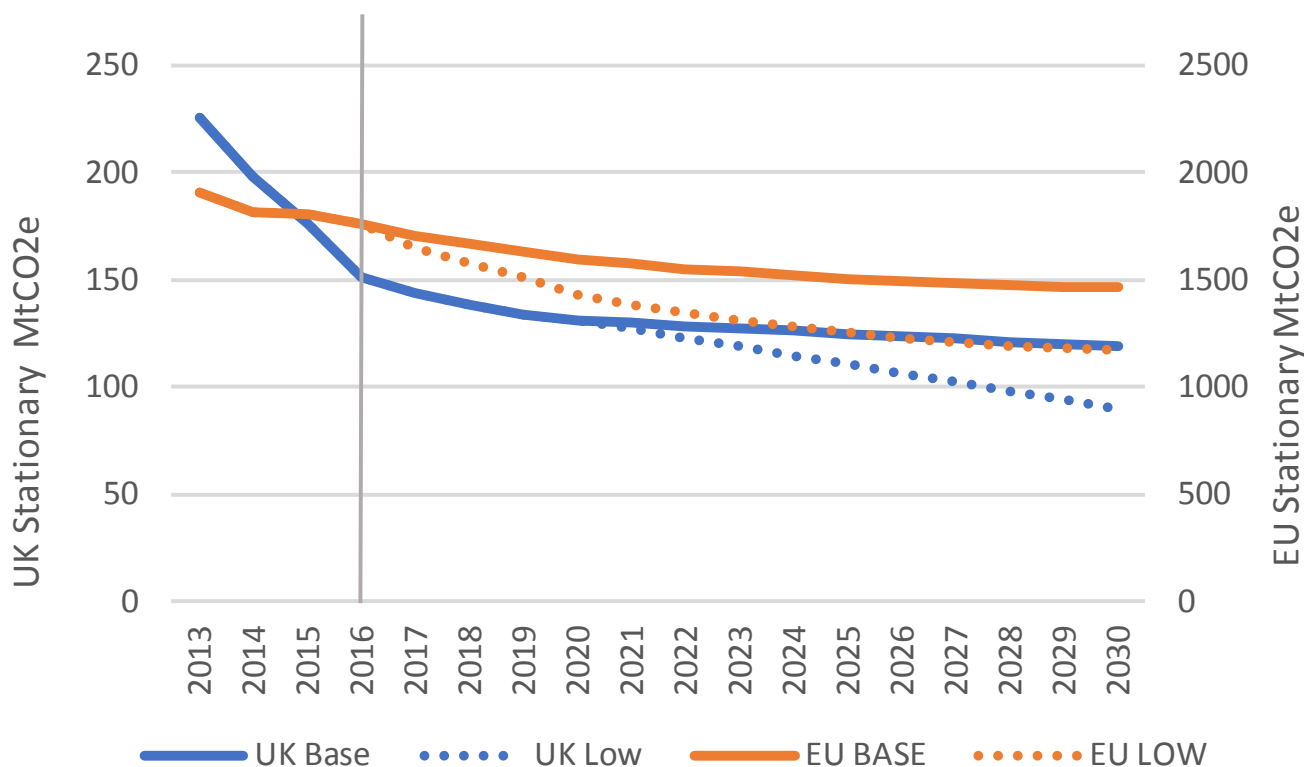
Chart 4 below shows our projections of emissions for the current EU and for the UK under two scenarios: a base case and a low case. The scenarios both represent “business as usual” emissions, with no changes to emissions as a result of a UK departure from the EU ETS.

The UK base case shows moderate falls in emissions, broadly in line with historical trends for the EU as a whole. UK emissions in the sectors covered by the EU ETS fall at a rate of 2-5% p.a. before 2020 in both scenarios. After 2020 they only go down by about 1% p.a. in the base case. This pattern reflects the fact that the majority of low cost, easy to achieve decarbonisation in the UK sectors covered by the EU ETS, mainly reducing coal use, has already taken place. Consequently, further progress is likely to remain relatively slow in the base case.

However in the low case we project emissions falling more rapidly again as more low carbon generation comes on line. This case is broadly in line with projections by the UK Committee on Climate Change for the fifth carbon budget¹².

Under the low case, emissions for the EU as a whole fall rapidly. Total EU emissions have substantial potential for reduction because reductions to date have been less than in the UK. In particular, coal fired power generation still accounts for 40% of emissions covered by the EU ETS, so there is very large potential for reduction from this source. Emissions for the EU therefore appear more likely to be close to the low case than do UK emissions.

Chart 4: Historic and forecast emissions for the UK and remaining EU27

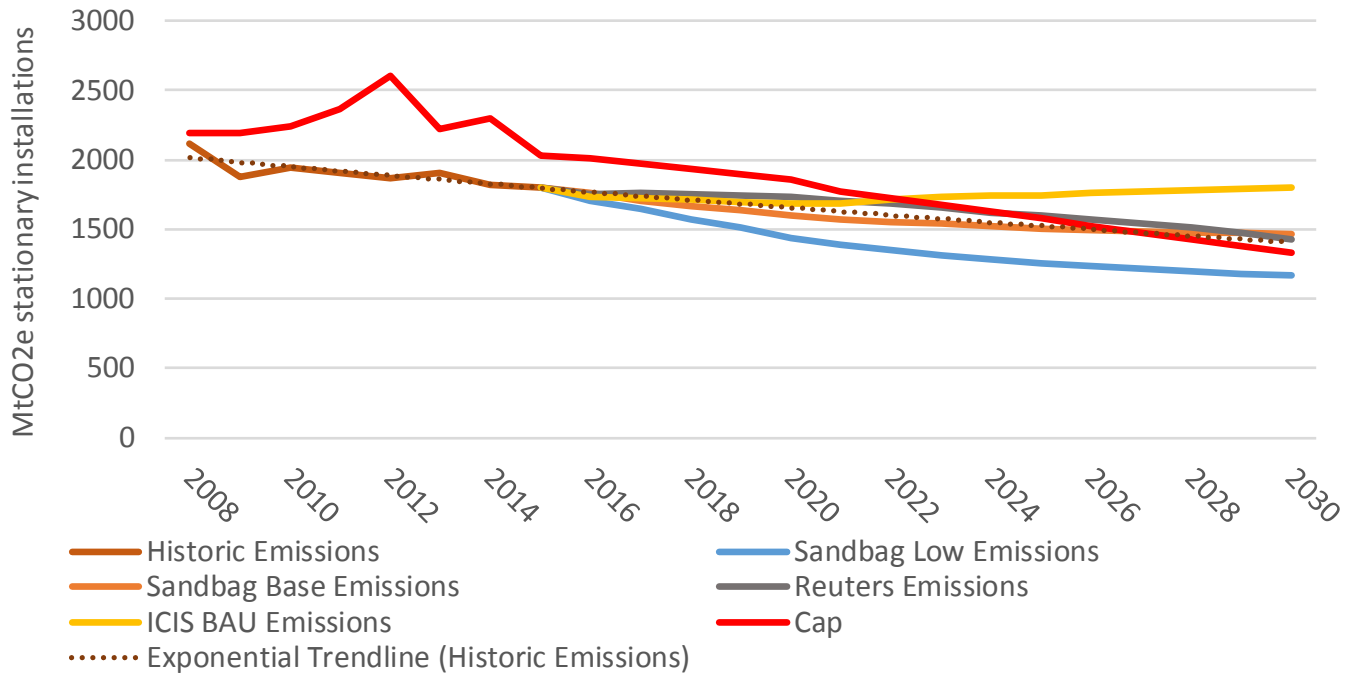


Note: Data for 2016 remains provisional

¹² see Fig 6.3 in <https://www.theccc.org.uk/publication/the-fifth-carbon-budget-the-next-step-towards-a-low-carbon-economy/>

Chart 5 below compares our base case scenario with others¹³. It shows that our base case is broadly in line with consensus projections. However, we note that such projections have often proved too high in the past. We consider an outcome more towards our low case to be quite probable, and emissions above our base case to be unlikely.

Chart 5: Comparison of emissions sources



¹³ Emissions forecasts provided to Sandbag by Thomson Reuters and ICIS Tschach Solutions in mid-2016

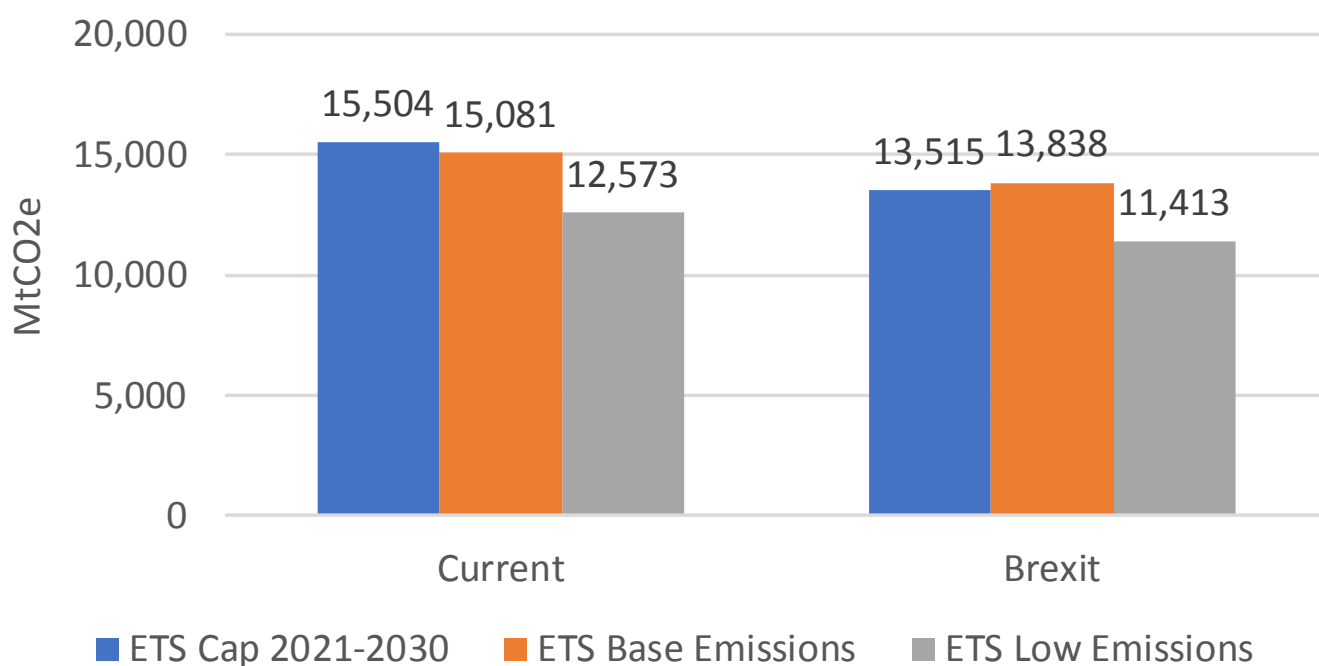
3.3 Changes to the supply demand balance

Chart 6, below, shows that if the UK continues as a member of the EU ETS the cumulative emissions for Phase 4 are likely to be 422 million tonnes below the cap even in the base case, and by much more in the low emissions case. Thus, no scarcity of allowances will be created by the Phase 4 cap with the UK still part of the EU ETS.

The removal of the UK changes this position because expected UK emissions for Phase 4 are less than the reduction in the cap due to the UK leaving the system. With the UK removed the cumulative cap for Phase 4 is 323 million tonnes below base case emissions. The system is thus tighter as a result.

The difference between the cumulative cap and cumulative emissions thus changes by a total of 745 million tonnes over Phase 4, tightening the cap by this amount. This is about 5% of the cap, and about 20% of the total surplus at the start of Phase 4. It thus represents a material tightening of the market. Under the low case the net tightening is slightly greater at 828 million tonnes.

Chart 6: Effect of the UK leaving the EU ETS on the supply demand balance during Phase 4

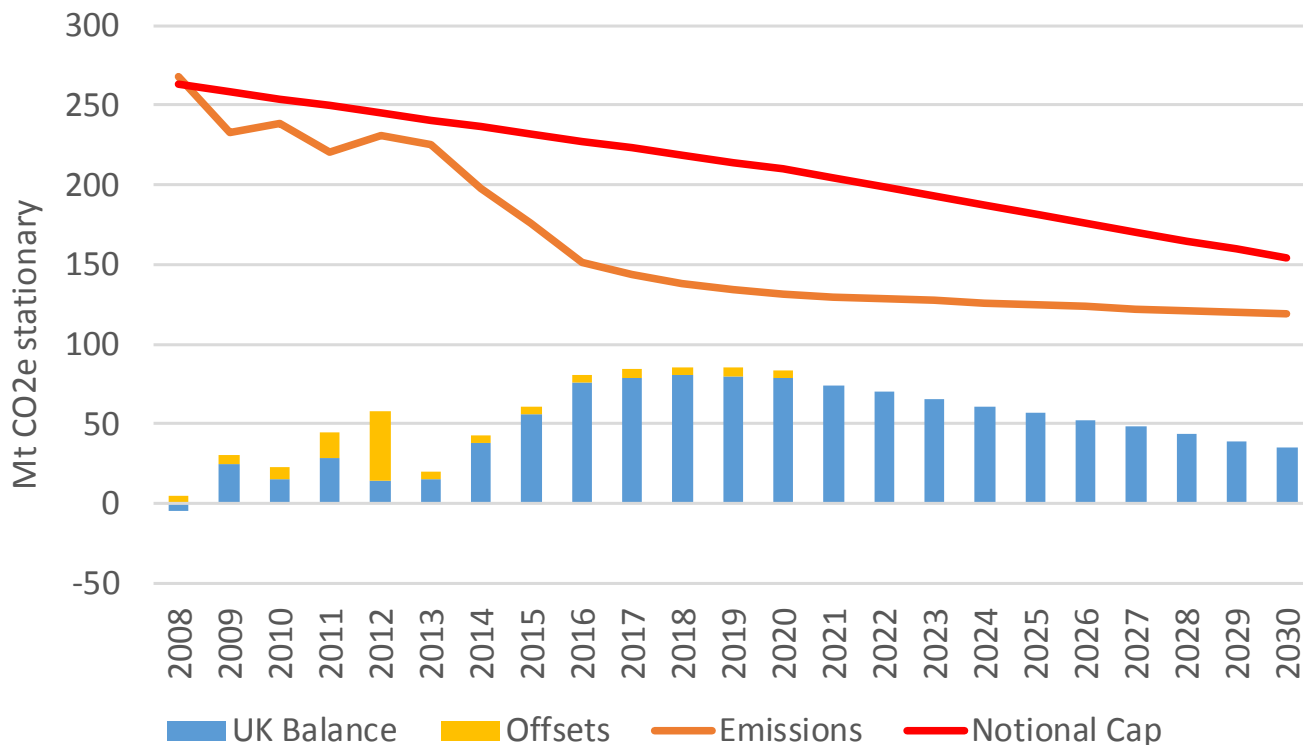


Note: Numbers in the text correspond to the chart as follows. The current system is $15504 - 15081 = 422$ (with rounding) long. After Brexit the system would be $13838 - 13515 = 323$ short. The total change in the balance is $422 + 323 = 745$.

UK emissions have decreased substantially in recent years and this is expected to be sustained. This is shown in Chart 7 below. The difference between the UK's share of the notional cap (red line – note this is not the UK's allocation) and the UK's expected emissions (orange line) is shown the blue bars. This difference is the amount of additional scarcity introduced into the market in the event of the UK leaving the EUTS. The total over Phase 4 is the change of 745 million tonnes in the net tightness of the cap referred to above.

The notional cap is that which the UK would have received if it had the same percentage emissions reductions as the current EU28 based on shares of emissions in 2005 (see section 3.1). This is not the same as the UK’s current allocation, which is much lower.

Chart 7: Decrease in UK emissions and cap since 2005



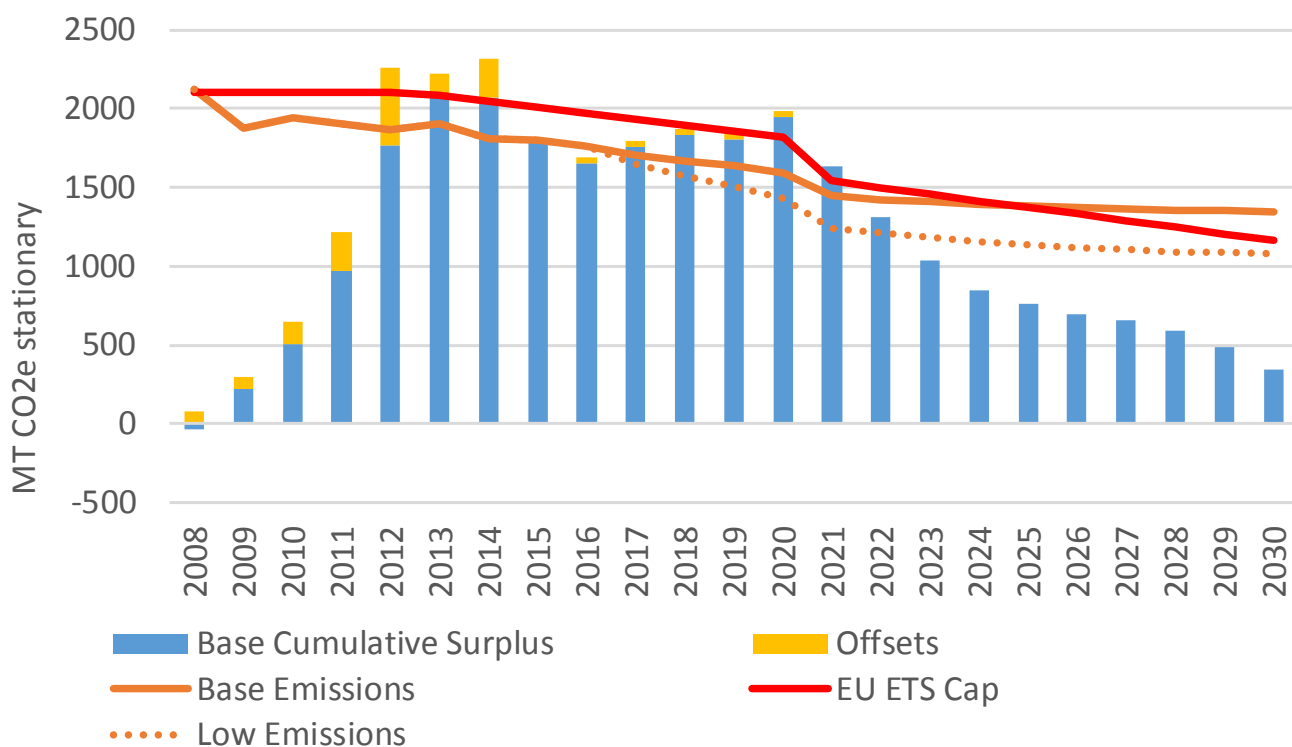
Note: offsets to 2012 are actual. After that offsets are remaining international credit entitlements.

The UK has until now been a net buyer of allowances. However, it was close to balance last year – net purchase less than 8 million tonnes – and would likely have been a net seller had there not been backloading of allowances¹⁴. The decrease reflects a range of factors, notably carbon price support increasing the cost of emissions, which has greatly reduced UK coal generation.

With the UK no longer part of the EU ETS, both the cap and emissions would be reduced. However, consistent with the situation for the UK, the EU27 cap falls by more than emissions. Base case emissions fall below the cap by around 2025. However, in the low case emissions remain below the cap throughout Phase 4.

¹⁴ Backloading last year was 200 million tonnes, so the UK share likely about 20 million tonnes.

Chart 8: EU ETS supply and demand after Brexit



3.4 Effect on the evolution of the surplus

Chart 9, below, shows the cumulative surplus and MSR in the base case with and without the UK leaving the EU ETS. The surplus falls slightly more rapidly in the case in which the UK leaves the EU ETS, because the cap is slightly tighter relative to demand.

This difference is attenuated by the role of the MSR. The additional surplus that is present with the UK in the system is largely absorbed by the MSR during Phase 4, so the difference in the surplus between the cases with and without the UK is only 230Mt in 2030. The effective tightening is thus much less than the full difference in the supply demand balance over the phase of 745 million tonnes (shown above).

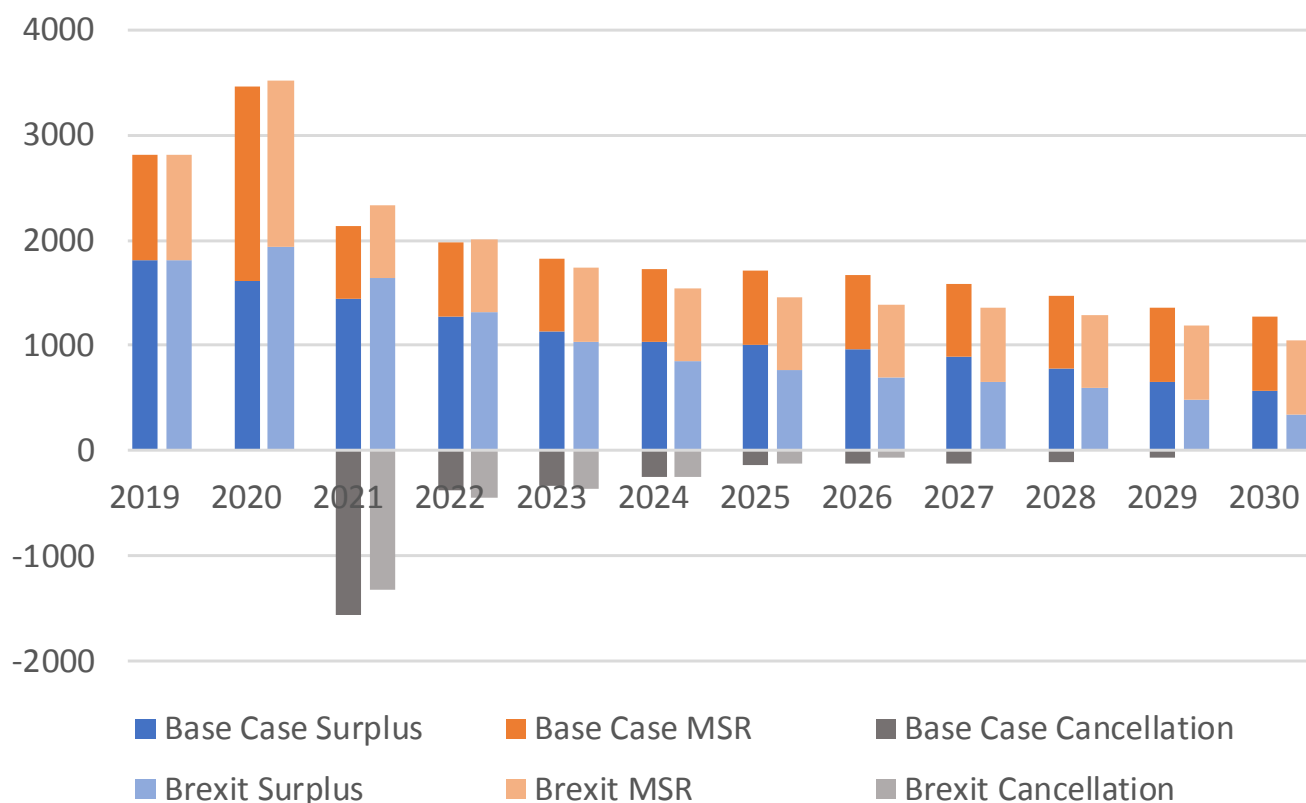
The market returns to scarcity around 2030 under these projections, with the surplus disappearing only about one or two years earlier than would otherwise be the case. The MSR remains at its size limit.

In the low emissions case the tightening of the supply demand balance has almost no effect on the market as it so heavily oversupplied in any case.

The continuing oversupply with either base or low case demand for emissions has been extensively analysed by Sandbag¹⁵. The surplus implies that continued reform of the EU ETS remains necessary in any case.

¹⁵ The oversupply of the EU ETS and options for addressing the problem have been extensively covered by Sandbag over a long period. For a recent example <https://sandbag.org.uk/wp-content/uploads/2016/11/161215-Comparing-options-for-ETS-reform.pdf>

Chart 9: Surplus and MSR volumes



Both cases assume a 700Mt limit on the size of the MSR from 2021. This is a hybrid scenario that incorporates elements of both the EP and Council positions in the latest negotiations. The total volume cancelled from the MSR over Phase 4 under our base case is 3Bt, while under the Brexit scenario the cancelled EUAs amount to 2.5Bt. The additional cancellation is the reason the difference in the surplus between the two cases in 2030 (235 million tonnes) is less than the difference between the two cases in allowances supply over the whole of Phase 4 (750 million tonnes).

We have examined a sensitivity to the size limit on the MSR not being adopted as part of the current reform package. This has almost no effect on the market in Phase 4 because the system continues to have a surplus above the MSR release threshold. Instead, the MSR is approximately 500 million tonnes larger in 2030 in the case where the UK remains part of the EU ETS. The size limit on the MSR is more relevant for the long-term stability of the system.

We also assume that the surplus available to market is slightly larger in 2020, and the MSR correspondingly smaller, because the UK's proportion of backloaded allowances is auctioned rather than placed in the MSR (see Annex 1). However, this change to the initial surplus makes almost no difference to the position in 2030 because the additional allowances almost all end up in the MSR in any case.

3.5 Effect on prices

There are likely to be two distinct sets of effects on prices if the UK leaves the EU ETS.

In the short term, prices may weaken. UK participants are likely to sell EUAs they have previously banked when the UK withdraws, leading to an increase in short term supply. If UK allowances currently destined for the MSR are auctioned, as we have assumed, this would increase the surplus available to the market as noted above.

In the medium to longer term the prices would be expected to rise slightly as the market becomes scarce slightly earlier due to the tightening of the market. Indicatively, we estimate that this will raise prices by about 10% on average over Phase 4 (typically around €0.5-2/tonne over the period to 2030), perhaps somewhat more towards 2030 as the market tightens.

3.6 Effect on total emissions under the EU ETS

Emissions under the EU ETS seem likely to be slightly reduced by the higher price. We estimate indicatively that this effect might reduce cumulative emission over Phase 4 by around 30-100 million tonnes.

This is a rather small effect: about 0.2-0.7% of the total cap over the period. It is also less than a tenth of the net tightening in the supply demand balance over the period, largely because of the continuing surplus. This leads to most of the additional net supply from UK volumes (which are included in a cap if the UK remains in the EU ETS) being absorbed into the MSR - see above.

There is a further potential long-term effect. The tighter cap resulting from departure of the UK will also set a more stringent limit at the end of Phase 4. This could lead to a lower starting point for Phase 5 after 2030, potentially providing longer term benefits. However, the post 2030 cap need not take the end of Phase 4 as its starting point – the same results could be achieved by simply resetting the cap.

3.7 Necessity of continuing EU ETS reform

None of the implications of the UK leaving the EU ETS suggest that it will have enough of an effect that the system becomes adequately tight, with a scarcity of allowances. Even in the event of UK departure the system is likely to remain oversupplied throughout much of the 2020s. Further reform of the EU ETS will therefore continue to be necessary. This will include:

- Currently proposed reforms, including an effective limit on the size of the MSR and the increase in the rate of transfer of the surplus to the MSR.
- Future reforms which improve the underlying supply demand balance. These should desirably be implemented as soon as possible.

Sandbag has covered these issues extensively in its previous work, and the essential conclusions of that work are unaffected by any departure of the UK from the system.

4. Implications for UK policy

A UK departure from the EU ETS would raise various issues for the UK. Some of these are now considered.

4.1 The need to modify UK policy

The UK's emissions will depend on the other policies that are put in place. UK emissions reductions are driven by legally binding carbon budgets under the Climate Change Act (2008). Carbon budgets corresponding to the whole of Phase 4 of the EU ETS have now been passed into law.

The UK has a range of options for achieving its carbon budgets. In many cases, present policies can be adapted to account for the loss of the EU ETS. Carbon Price Support and the Climate Change Levy, both of which effectively create a carbon price in the sectors covered by the EU ETS (although some firms are exempt from the Climate Change Levy under Climate Change Agreements), may be modified and strengthened to reflect the absence of the EU ETS price signal. This would be consistent with the Government's stated wish to see a defined total carbon price in the power sector after 2020¹⁶.

In future, the UK could also establish its own ETS¹⁷. This could be similar in scope to the current EU ETS or broader, along the lines of the WCI systems (California, Quebec and now Ontario) which currently cover over 80% of emissions in their jurisdictions. A more widely drawn system could serve to operationalise carbon budgets through the imposition of a binding cap. Complementary policies would also be needed to assist with structural transformation and with other necessary changes such as improving residential energy efficiency, which are not well managed by trading. Nevertheless, this could prove an efficient and effective way of putting the UK on a firmer track for meeting its carbon budgets.

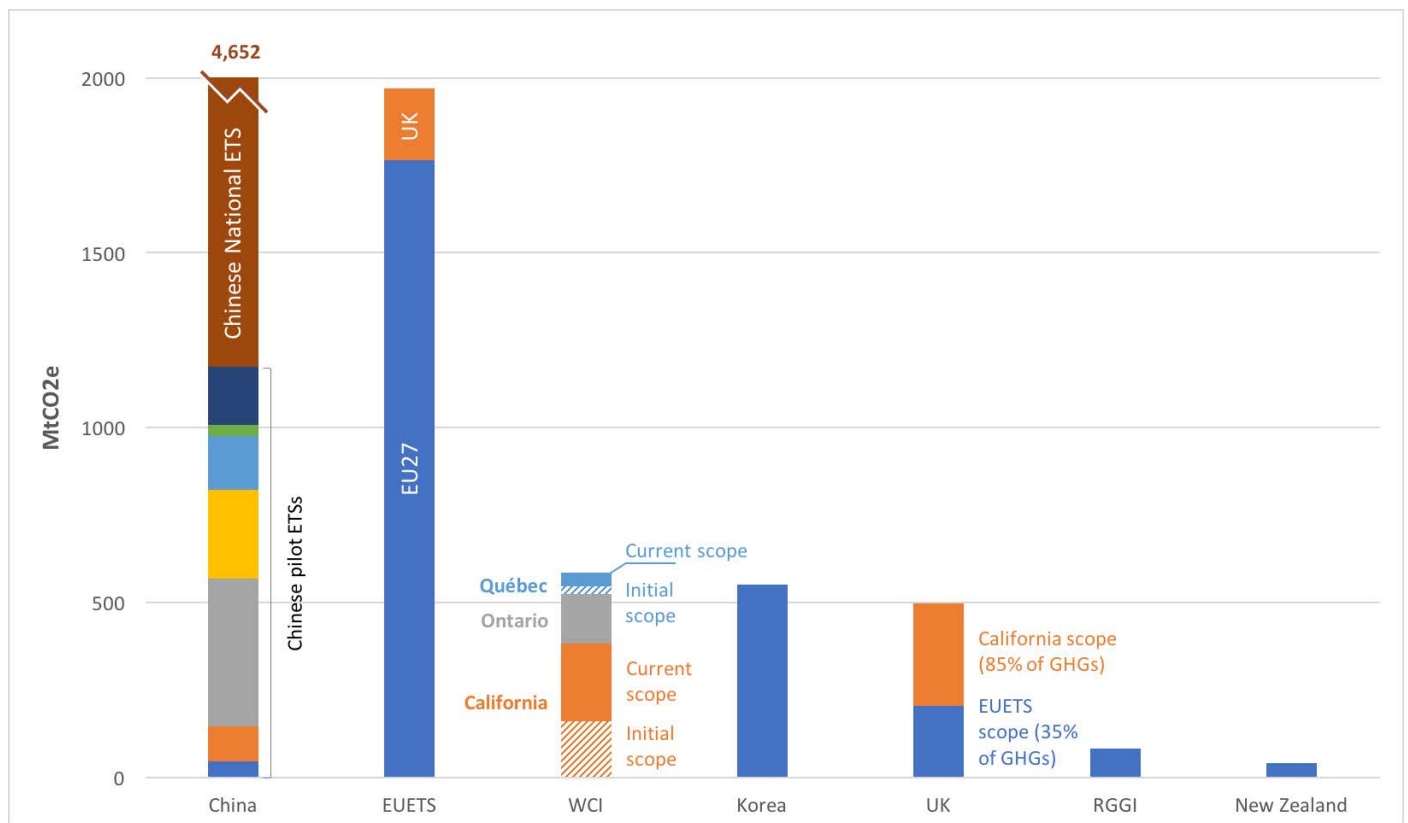
An independent UK emissions trading system would be large enough to be viable on its own, especially if it had broad coverage. Chart 10 shows the size of a potential UK ETS for two different cases: coverage of the EU ETS and wider coverage (similar as a percentage of total emissions to the WCI). It shows the UK system would be slightly larger than the WCI was before Ontario joined. WCI emissions are now somewhat larger than those of the UK.

The relative scale of the WCI and UK systems could imply that linkage between the two would be tractable without the UK dominating the existing system. However the WCI was designed for sub-national entities in North America. There may, consequently, be political obstacles for WCI states entering into agreements that involve other countries, especially outside the North America Free Trade Agreement area. Nevertheless Mexico (a NAFTA member) is reported to be interested in joining, and this may be welcomed by existing members. Any obstacles may in any case not extend to simple mutual acceptance of each other's allowances, perhaps up to a limited volume.

¹⁶ In the recent Budget Statement the Chancellor of the Exchequer said: "*The government remains committed to carbon pricing to help decarbonise the power sector. Currently, UK prices are determined by the EU Emissions Trading System and Carbon Price Support. Starting in 2021-22, the government will target a total carbon price and set the specific tax rate at a later date, giving businesses greater clarity on the total price they will pay. Further details on carbon prices for the 2020s will be set out at Autumn Budget 2017.*"

¹⁷ The UK had its own national ETS introduced in 2002 before the EU ETS was introduced, but this was limited in scope with only just over 30 participants. See <http://webarchive.nationalarchives.gov.uk/20130822084033/http://www.defra.gov.uk/Environment/climatechange/trading/uk/pdf/ukets1-4yr-appraisal.pdf>.

Chart 10: Comparison of a potential UK ETS with other systems



Note: the Chart shows the WCI system for two different scopes – that which was in place for the first two years of operation, and the subsequent scope. This is shown only for California and Quebec as Ontario did not join until the later period.

4.2 Accounting under the Climate Change Act

Necessity of change if the UK leaves the EU ETS

The way in which the traded sector is accounted for in assessing performance against carbon budgets will need to change if the UK leaves the EU ETS (Options 3-6). The UK’s legally binding carbon budgets for the traded sectors are currently assessed by assuming that emissions from the traded sector are equal to the UK’s allocation (auctioning plus free allocation) under the EU ETS cap¹⁸. These budgets will no longer exist if the UK leaves the EU ETS, even if the EU ETS is linked to a UK system. Accounting will therefore need to change, most likely to actual UK emissions from the covered sectors¹⁹.

Desirability of a change if the UK remains in the EU ETS

Even if the UK remained part of the EU ETS (Options 1 and 2) and a method of setting allocations for the UK could be agreed, which might prove difficult to achieve, an accounting change would have advantages. Indeed, such modifications have previously been [proposed](#) by Sandbag and others.

¹⁸ This consists of auctioning plus free allowances plus UK allocation under the NER. In Phase 4 it would also include any allocation from the Innovation Fund. Actual allocations are used, so backloaded volumes have been excluded from UK allocations. Future volumes placed in the MSR and thus excluded from auctioning would also be deducted from the total. If the UK were to leave the EU ETS and backloaded UK allowances currently destined for the MSR were to return to the market this would have a significant effect on measured performance against carbon budgets under current accounting.

¹⁹ Other approaches are also possible, for example using a cap from a UK ETS. The role of international offsets could also be reconsidered. However, the approach of using actual UK emissions seems the most straightforward and most consistent with the spirit of the Climate Change Act.

The main cause for concern under current arrangements is that the UK's actual verified emissions may be above its allocation. Actual verified emissions from the UK would thus potentially exceed the quantity limit specified in carbon budgets. The UK would be emitting more than its budgeted amount.

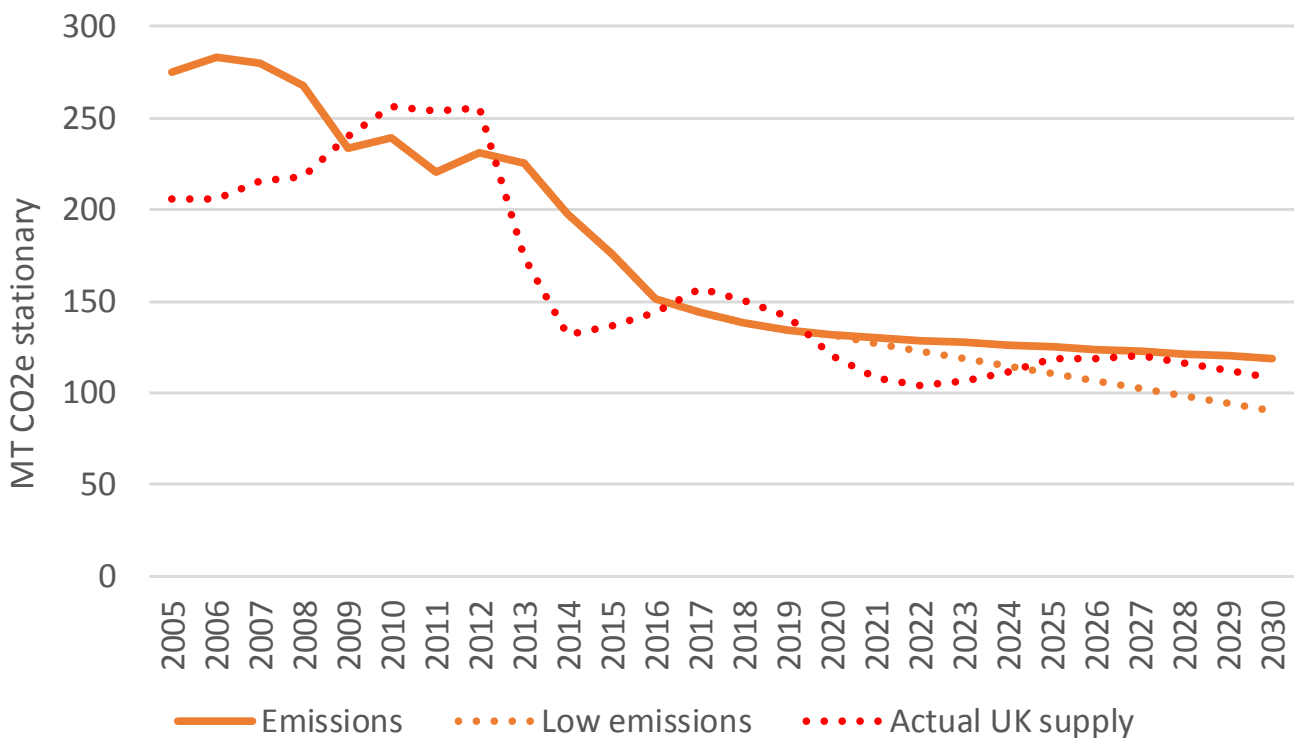
With the EU ETS in surplus and emissions below the cap in any case, these additional emissions are not matched by emissions reductions elsewhere. Total emission can thus increase as a result of this accounting treatment. This situation would not have been clear when the accounting rules were set, because the scale and persistence of the surplus with emissions below the cap would not have been evident. Furthermore at the time the UK would have had its own distinctive cap under National Allocation Plans which prevailed in Phase 1 and Phase 2 of the EU ETS.

An outcome with verified UK emissions for the traded sectors above the UK's allocation appears quite probable. Such a situation prevailed until the recent fall in UK power sector emissions. Under our base case emissions scenario verified UK emissions are also likely to be above the allocation in the 2020s when the EU ETS is still in surplus in Phase 4. The UK would thus potentially have verified emissions above the level of its carbon budget, even though the budget was in principle being met. This excess would not be matched by reduced emissions elsewhere. An increase in global emissions would thus be allowed as a result of an accounting treatment²⁰. This also occurs under our low case emissions scenario, but temporarily and to a lesser extent.

Chart 11 below illustrates some these effects. At the start of Phase 3 the UK allocation fell markedly. It continued to reduce as a result of backloading. Actual emissions were above the allocation until recently. This meant that the UK was emitting more than the notional amount included in carbon budgets and was a net buyer of allowances. With the marked fall in UK emissions in the last four years, allocations have come approximately into line with actual emissions. During the 2020s under our base emissions scenario emissions are again, as noted, expected to be above the allocation at least in the first half of the decade.

²⁰ Whether this led to total actual emissions being above carbon budgets would depend on the performance of the non-traded sector. However given the relative stringency of the fourth and fifth carbon budgets there is a risk that actual emissions would exceed the budget.

Chart 11: UK emissions in the traded sectors and supply of allowances



These considerations lead us to conclude that in any case it would be preferable for the UK’s accounting for the traded sector under the Climate Change Act to change to a basis of actual emissions.

4.3 The potential role of linkage to the EU ETS

As shown in Section 3, the EU ETS looks likely to remain weak with a surplus persisting for another decade or so, perhaps longer. There appear to be limited advantages to linking with an EU ETS in surplus. The usual advantages of linking do not apply to any great extent in the current state of the EU ETS. In particular:

- There is a risk with linked systems that the UK could simply buy in surplus allowances from the EU ETS to enable its own emissions, but these would not lead to any reduction in emissions in the remainder of the EU²¹. This drawback is especially severe if the allowances bought in by the UK would otherwise have gone into the MSR, as seems likely, and eventually be cancelled.
- There does not appear to be any efficiency gain from emissions being reduced at lowest cost, as prices under the EU ETS do little to signal emissions reduction and are below economically efficient levels. Instead emissions reductions are largely the result of other policies, including the UK’s own carbon pricing.

Linkage to the EU ETS may have more advantages if in future the supply demand balance is restored so that there is a significant scarcity of allowances. The likely delay in this taking place implies there is a period of some years available if required to design new policies that include linkage.

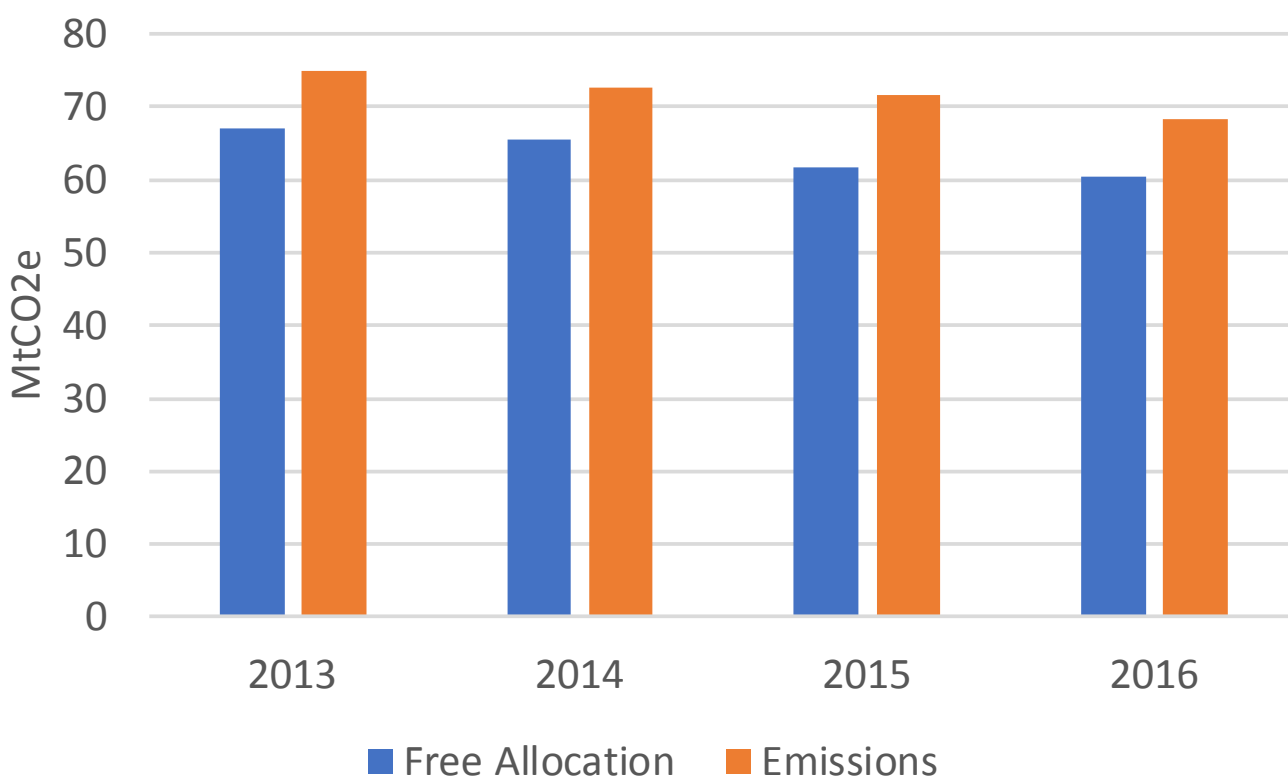
Linkage may also require the UK to adopt a design which closely matches that of the EU ETS. Such a design may be suboptimal from a UK perspective.

²¹ This type of effect is usually referred to as “buying hot air”.

Under Option 5 (see Section 2) we have identified that possibility that the UK could allow limited compliance for emissions above a benchmark for those industries at risk of carbon leakage. The number of allowances bought in would clearly depend on the benchmarks set and prevailing circumstances. At present UK industry buys in typically around 8 million EAUs, at a cost of around €40 million (£34 million) p.a.. This gives an order of magnitude indication of what industry might require if benchmarks and output were similar. However not all sectors would be included in one-way linkage under Option 5, so the actual number of traded allowances might be smaller.

The advantages of Option 5 may outweigh the wider concerns about linking while the EU ETS remains in surplus. As such Option 5 may be an exception to a general preference for avoiding linkage while the EU ETS remains in surplus. However potential loss of revenue from the UK under some variants of this option, because industry was buying in EUAs from the remaining EU27, may cause some political difficulties.

Chart 12 UK industrial emissions compared with free allocations



Source: EUTL

4.4 Access to auction revenue and funds

The UK would potentially lose some sources of revenue on departure from the EU ETS. However equivalent revenues (or more) could readily be created from adjusting the UK’s own carbon pricing and from the absence of transfers via funds. Sources of potential loss include the following:

- Revenue from auctions of EUAs. This was approximately £340 million in 2016.²² However this could readily be replaced simply by adjusting the existing taxes in the UK (Carbon Prices Support and the Climate Change Levy).

²² Source: ICE

- Allocations of funds from the New Entrant Reserve, although as far as we can determine such allocations have been small²³.
- There will be no receipts from the Innovation Fund in Phase 4. It is not clear that the UK would be a net recipient from such a fund in any case.

The UK is not eligible for the receipt of funds from the planned Modernisation Fund in Phase 4.

In view of these factors, significant net loss of funds to the UK government as a result of departure seems unlikely and there may be a gain to the extent that the equivalent of auction revenues currently used for funds may be retained under the UK's own carbon pricing.

5. Implications for wider carbon markets

If the UK is no longer part of the EU ETS it could introduce new or modified policies. These could provide models for carbon pricing for others to follow, potentially including examples of linking and co-operation with other systems.

The wider international effect will probably depend on perceptions of outcomes. A UK departure from the EU ETS could be seen as contributing to the fragmentation of carbon markets, and thus be perceived as a retrograde step. Some have argued that leaving the EU ETS would undermine the UK's reputation as a global leader on climate change²⁴. However it is not clear why this would necessarily be the case. The UK may continue to pursue ambitious action on climate change, and indeed may strengthen such measures. Departure from the EU ETS may be widely seen as an inevitable outcome of the wider Brexit arrangements. Furthermore, the EU ETS is only one of a number of carbon markets globally and those in China and the WCI are expanding.

Conversely a UK departure could have advantages if the UK is seen to further best practice and establish innovative approaches to carbon pricing. Furthermore, the architecture of the Paris Agreement is focussed on national contributions. It seems likely that as part of its departure from the EU the UK will need to establish its own NDC, which could be perceived as naturally aligning with the UK pursuing its own policy. This is especially the case given the role of carbon budgets in the UK (see Section 4).

UK pricing design as a model could encourage establishment of other carbon pricing systems, and improve the design of new and existing systems

Carbon pricing remains relatively new. As recently as 2004 it was limited to a few small jurisdictions accounting for less than 1% of global emissions. It is now in place or in the process of being introduced for over 20% of global emissions²⁵. As pricing has become more widespread many lessons have been learnt. The EU ETS was a pioneering system in part because of its scale, and many of the systems introduced around the world since then have learnt from both its strengths and weaknesses.

If the UK were to establish its own carbon pricing arrangements it could draw on lessons from the EU ETS and elsewhere, and so demonstrate best practice. This is likely to extend to a UK ETS. Desirable features of a UK ETS may include:

- Wide coverage of sectors
- Some form of price containment, especially a floor price which is already present in the power sector

²³ Three projects were approved but we have been unable to confirm whether any funds were allocated.

²⁴ See Prof, Michael Pollitt, quoted in <https://www.publications.parliament.uk/pa/cm201617/cmselect/cmbeis/909/909.pdf>

²⁵ See World Bank State and Trends of Carbon Pricing report, Figure 5. The total quoted includes the national ETS in China. <https://openknowledge.worldbank.org/bitstream/handle/10986/25160/9781464810015.pdf?sequence=7&isAllowed=y>

- Indicators of a long-term emissions trajectory

A well-designed UK system could in turn provide an additional model for others to learn from and follow as appropriate to their own circumstances.

The terms of the Climate Change Act allow for trading systems to be implemented easily, potentially making the introduction of a UK ETS more tractable.

The demonstration of a widely drawn EU ETS within the legally binding Climate Change Act may provide a particularly strong example of best practice, and so enhance UK leadership

The UK Climate Change Act remains a leading example of how to establish a clear, legally binding downward path for emissions. Several other countries have adopted elements of this model.

It would be possible to further enhance the status of binding carbon budgets by establishing a widely drawn trading system that covered a high proportion of emissions. This could follow the model of the WCI, where the cap covers over 80% of emissions, about twice the proportion of the EU ETS.

The combination of a legally binding trajectory operationalised by a well-designed widely drawn ETS, including price floors, would be world leading, and indeed constitute world's best practice. This may in turn inspire good practice elsewhere.

Linkage with other systems could provide a model to promote further linkage, especially if outside Europe

Linking means that one system's allowances or other trading units can be used, directly or indirectly, by a participant in another system for compliance. Linking thus creates opportunities for inter-system trading. This is widely considered to have a number of advantages.

- The inclusion of more participants entails a greater diversity of sources and more abatement options. This expansion of the market, in turn, improves market liquidity and hence results in a more efficient allocation of resources, directing them to least-cost abatement measures and thus lowering the overall costs of achieving a given collective level of emission reductions²⁶.
- Linking can reduce the volatility of trading systems when subject to economic shocks. This is particularly important for smaller systems linked to larger systems, for example the EEA countries and Switzerland linking to the EU ETS. It is especially beneficial for different types of economies subject to different types of shock²⁷.
- Linking, and in particular the common carbon price that will result, may reduce concerns about industrial competitiveness, though probably only where the linked systems account for a large proportion of trade in sectors at risk of carbon leakage.
- There may be opportunities for improving administration and governance through learning, and the number of different compliance regimes with which international companies face may be reduced, reducing their costs

There are also considerable difficulties associated with linkage.

²⁶ Grubb (2009) <http://www.tandfonline.com/doi/pdf/10.3763/cpol.2009.0665>

²⁷ <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/09/Working-Paper-208-Doda-and-Taschini-August2016.pdf> The authors defined the conditions under which this does and does not apply.

- Jurisdictions often go through extensive debates to reach their own conclusions about preferred scope, basis, levels of ambition, costs and cost control, and their proposed use of various internal and external offset credits. There is no common view on what constitutes a ‘good’ design, and some characteristics are incompatible²⁸. Such differences of preferred design may limit potential for linkage, because common design may be suboptimal for one of the jurisdictions.
- There may be concerns about sovereignty or regulatory control, and dependence on others for important policy decisions.
- There is a potential incentive on each separate jurisdiction to issue more allowances. Cost savings of trading do not necessarily lead to lower emissions. In particular, environmentally more concerned countries may choose fewer allowances if these are tradable, but this may be offset by the choice of more allowances on the side of environmentally less concerned countries²⁹. Agreeing a common, stringent cap may prove challenging.
- Transfers of funds between linked jurisdictions (“paying for abatement abroad”) may prove politically contentious.
- There will often be administrative costs to establishing linkage.

These issues have led many to be more cautious about linking in practice than initial consideration of the advantages would suggest. Consequently, there are only a few examples of linkage in practice (see online annexes). These are mainly restricted to small economies linking to larger systems, with the exception of the WCI.

Some authors have argued that a staged approach to linkage is beneficial, because consultation and co-operation between systems can capture important benefits such as learning about processes³⁰.

If the UK were to establish its own trading system, and were to be able to overcome the difficulties of linkage, for example by establishing a link with the WCI or the EU ETS, this could provide a useful model for further linkage. Furthermore, well-designed linkage with a well-functioning system could help demonstrate the benefits of wider carbon pricing, and this could encourage these advantages to become more widely realised.

A small step towards restoring credibility of the EU ETS

Analysis in Section 3 of this report indicated that the UK’s departure from the EU ETS would slightly tighten the supply demand. As such it would help to a small extent to resort the credibility of the EU ETS. This would in turn increase the credibility of carbon pricing more generally, which could support its adoption elsewhere.

However, the departure of the UK is not nearly enough on its own to make the EU ETS into an effective mechanism for emissions reductions, and much more will need to be done.

A balance of influences

The analysis in this report has shown a balance of influences on individual jurisdictions and the wider international picture. However a consistent theme has been the need for continuing policy development, setting clear and

²⁸ Grubb (2009)

²⁹ Moreover, if the establishment of a trading system requires the unanimous approval of all countries, there may be no agreement on trading even if it were to lead to less pollution overall. Conversely, a trading system may find unanimous approval even if it induces more pollution. See Carsten Helm (2003) International emissions trading with endogenous allowance choices, *Journal of Public Economics*. <http://www.sciencedirect.com/science/article/pii/S004727270200138X> See also Carbone et. al. (2009) The case for international emission trade in the absence of cooperative climate policy who find advantages of linking small groups of countries. <http://www.sciencedirect.com/science/article/pii/S0095069609000382>

³⁰ See <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-13-04.pdf>

binding targets which reflect the needs of the climate, and implementing these through cost effective measures. A strong carbon price has an important role to play in this. It is the job of policy makers in Europe, whether in the EU or the UK, to deliver this.

About this report

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