

BREXIT: Maintaining free and fair trade of electricity and gas in Europe

A EURELECTRIC initial analysis paper

June 2017

EURELECTRIC is the voice of the electricity industry in Europe.

We speak for more than 3,500 companies in power generation, distribution, and supply.

We Stand For:

Carbon-neutral electricity by 2050

We have committed to making Europe's electricity cleaner. To deliver, we need to make use of **all low-carbon technologies**: more renewables, but also clean coal and gas, and nuclear. Efficient electric technologies in **transport and buildings**, combined with the development of smart grids and a major push in **energy efficiency** play a key role in reducing fossil fuel consumption and making our electricity more sustainable.

Competitive electricity for our customers

We support well-functioning, distortion-free **energy and carbon markets as** the best way to produce electricity and reduce emissions cost-efficiently. Integrated EU-wide electricity and gas markets are also crucial to offer our customers the **full benefits of liberalisation**: they ensure the best use of generation resources, improve **security of supply**, allow full EU-wide competition, and increase **customer choice**.

Continent-wide electricity through a coherent European approach

Europe's energy and climate challenges can only be solved by **European – or even global – policies**, not incoherent national measures. Such policies should complement, not contradict each other: coherent and integrated approaches reduce costs. This will encourage **effective investment to** ensure a sustainable and reliable electricity supply for Europe's businesses and consumers.

EURELECTRIC. Electricity for Europe.

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Introduction

The development of the EU's Internal Electricity Market (IEM) has had significant benefits for consumers in both the European Union (EU) and the wider European Economic Area (EEA), including those in the UK. It has enabled available resources and capacities to be shared across borders to reduce costs, improve security of supply and better integrate renewable electricity¹.

To develop these benefits further EURELECTRIC supports the development of a larger, more integrated European electricity market. Harmonised rules will ensure that existing and new electricity connections to third country markets can be optimised and do not lead to distortions that have adverse effects on wholesale electricity prices or security of supply in EU's Internal Energy Market (IEM).

The UK has played a leading role in the development of the IEM, from market liberalisation, the development of the world's first major carbon market and supporting the importance of energy security in Europe's geopolitical relationship with its neighbours. Given the mutual benefits and importance of energy to both parties in powering our economies and societies, EURELECTRIC views that this collaboration should continue as closely as possible.

In particular, given the physically networked nature of the energy industries collaboration is not only desirable, but it is essential as for these cross-border physical connections to function efficiently and not undermine the IEM. To ensure the integrity of the IEM, some common rules must be adhered to by connected third countries.

If there is a breakdown in the energy relationship between the UK and the EU the biggest impact will be felt on UK itself and neighbouring countries. In particular it would impact Ireland, as Ireland not only connects to the IEM through the UK, it also operates a Single Electricity Market (SEM) between Ireland and Northern Ireland. Maintaining this integrated arrangement is crucial to delivering an efficient market, value for consumers and security of supply on the island.

Furthermore, the UK has been heavily involved in defining the EU's energy and climate policy and supporting a robust carbon price signal as the key instrument for the long-term decarbonisation objective. The EU will therefore need to reconsider its capacity to meet its energy and climate targets, and to assess the impact of Brexit on the EU Emissions Trading Scheme (EU ETS) as well as other areas of energy and climate policy.

It is estimated that nearly 90% of the environmental legislation in the UK is implementing the EU secondary law. Moreover, several EU-originated environmental rules are implementing international obligations stemming from already concluded agreements. According to the UK government, the Great Repeal Bill should ensure that the whole body of existing EU environmental law continues to have effect in UK law. However, a misalignment of future rules between the UK and the EU could be expected in the medium and longer terms. The UK's withdrawal from the EU will have an impact on the IEM and the electricity industry as well the wider investment environment, in a process that could proceed for a longer period than the two years triggered by Article 50. In order to provide a first consideration of the possible implications for the European electricity sector, EURELECTRIC has prepared this paper to identify key priority areas to consider for the IEM, as the UK leaves the EU. EURELECTRIC's main aim in this paper is to

¹ In a 2013 report for the European Commission Booz & Co et al estimated benefits of electricity market coupling in the range of €2.5-4 billion per year up for the EU27 or €5-8 per person (at the time included UK and not Croatia) - https://ec.europa.eu/energy/sites/ener/files/documents/20130902_energy_integration_benefits.pdf

promote the benefits of free and fair trade of gas and electricity in Europe and ensure that aligned cooperation between the UK and EU on energy matters can continue as closely as possible.

The electricity sector should not get lost in the upcoming negotiations between the UK and the EU. When setting the terms of reference and evaluating the next steps, it is important to keep in mind the impact of Brexit on the following areas: the Internal Electricity Market (IEM); SEM, the EU energy and climate frameworks; the EU Emissions Trading Scheme (ETS), the Euratom Treaty and Community; trading (hedging) within Financial Regulation and Gas.

1. What is the impact on the Internal Electricity Market (IEM)?

Current scenario: the hardware and the software of the IEM

The hardware: the physical IEM infrastructure

The IEM is made up of a number of electricity markets that have developed at sub-national and national levels over time, which are becoming increasingly interconnected².

The UK has been physically connected to the Continental European electricity system via France since 1986, and Ireland via the UK since 2002. The electricity market in Great Britain (GB) currently has 3 GW of interconnection capacity with Continental Europe, as well as 1GW of interconnection capacity with the Single Electricity Market (SEM) operated jointly between Ireland and Northern Ireland.

It is expected that by 2022, if all projects that have regulatory approval are developed, there will be an additional 6.8GW of interconnection capacity between Continental Europe and GB (9.8GW in total), and an additional 0.5GW between the Irish SEM and GB (1.5GW in total). In March 2017 the UK Government's own reference model in its annual energy projections outlined interconnection capacity being 20GW in 2024, up from the previous expectation of 13GW in its previous annual update³. Irrespective of the UK's relationship with the IEM, these physical connections will remain and continue to be developed.

The EU has an indicative target for each Member State to have interconnection capacity equivalent to 10% of installed capacity by 2020. Both the UK and connected markets including Ireland are expected to meet this target. A high-level target to increase this level by 2030 has been agreed, but what exact metric to be used is still under consideration.

An important EU tool to help meet this interconnection target and develop the physical infrastructure of the IEM is the Connecting Europe Facility (CEF) for Energy, which helps deliver the EU's Projects of Common Interest (PCI) under the Trans-European Networks for Energy (TEN-E) Regulation. The CEF will help develop key strategic energy infrastructure by providing €5.35billion between 2014 and 2020 to support the development and construction of gas and electricity PCIs.

The software – the rules of the IEM

Whilst physical connections will continue to function after the UK has left the EU, what enables them to operate efficiently are the IEM rules, particularly those regarding market coupling, i.e. the rules handling price differences between Member States/regions within the EU. The IEM rules are primarily contained within the Electricity Regulation, the Electricity Directive and the subsequent Network Codes and Guidelines – much of which is undergoing revision with the "Clean Energy for All Europeans Package". There are also rules regarding IEM transparency in the Regulation on wholesale Energy Market Integrity and Transparency or REMIT. In a report for the European Commission in 2013, it was estimated the benefits to the EU27 (which included the UK, but not Croatia) of integrated electricity markets could be up to €40bn in 2030 compared with a baseline scenario.

² Interconnectors are the wires between electricity markets that transfer electricity from low price markets to high price markets, enabling Europe to share available capacities and resources, thus improving the overall economic welfare for all consumers.

³ UK Department for Business, Energy and Industrial Strategy (BEIS 2017) - Updated energy and emissions projections: 2016

In €bn/year	2015	By 2030
Benefits from integrated electricity markets compared to baseline scenario in 2013	10 to 16	12.5 to 40
If 50% reduction in transmission investment	-3 to -3.5	-3 to -5
If national capacity measures	-1 to -3	-3 to -7.5
If shared balancing	~0.1	0.3 to 0.5
If increased demand side response	0.5 to 1	3 to 5
If coordinated RES investment	n/a	15.5 to 30

Figure 1. Summary of benefits of EU electricity market from 2015-30, Booz&Co et al (2013) – “Benefits of an integrated European energy Market” a report prepared for the European Commission

To ensure the free and fair competition between participants in the Single Market, the EU Treaties set out rules to prevent undue state aid. The current State Aid Guidelines for Energy and the Environment run from 2014 to 2020, and ensure that any governmental aid meets EU objectives in a way that minimises impacts on the market, preventing cross-border distortions that could impact wholesale electricity prices and security of supply.

Other non-sector specific legislation, covering carbon pricing, financial regulation or environmental rules will also have a significant impact on the trade of gas and electricity. EURELECTRIC believes that the succession of rules around the IEM is critically important to ensure fair competition between generators in different markets. This includes the electricity market rules themselves, but also State aid and environmental requirements amongst others.

Why is this important when it comes to Brexit?

The hardware

If the UK is considered outside of existing EU interconnection targets, then attention should be given to connected Member States’ interconnection capacity as this could have an impact on their respective indicative interconnection targets. In particular Ireland’s ability to meet its interconnection targets would need to be considered, given it currently connects to the rest of the IEM through the UK.

Moreover, the UK would need to consider its role in TEN-E, PCIs and the CEF, which **is important to ensure the necessary physical infrastructure is in place to enable the flow of energy across Europe, which has benefits for UK and continental consumers.** It is also essential to guarantee a coherent regulatory framework to ensure the operation of interconnections and TSO cooperation for both the UK and Continental Europe.

If there is new focus on the development of a more integrated North Sea grid as per the North Sea Energy Cooperation Agreement agreed in June 2016, this would have obvious benefits for the UK to continue participating in the physical development of the IEM. EURELECTRIC would support the UK’s continued participation in the TEN-E, PCIs and CEF on an equitable basis. This is since instability could increase the costs of infrastructure projects and undermine their business case.

According to the data provided by Poyry and National Grid (figure 2), 8 proposed interconnection projects should be ready to start between 2019 and 2022. Depending on the results of UK-EU negotiations, the interconnection capacity between the following Member States and the UK is at risk:

Interconnection projects between 2019 and 2022	GW and project name
France	3.4 GW (Eleclink, IFA2, FAB Link)
Belgium	1 GW (NEMO)
Norway	2.8 GW (NSN)
Denmark	1.4 GW (Viking Link)
Ireland	0.5 GW (Greenlink)
Iceland	0.8 – 1.2 GW (Ice Link)

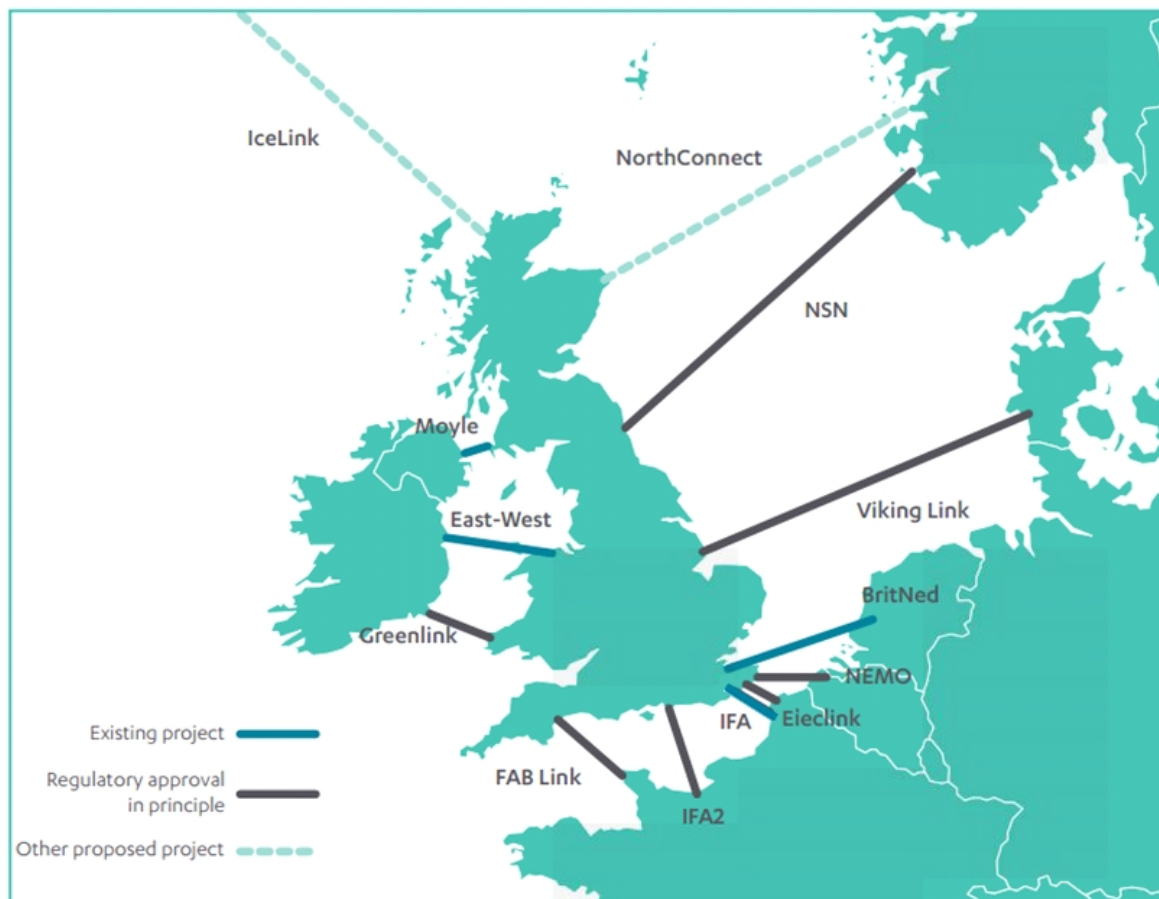


Figure 2. UK National Infrastructure Commission (2016), Source: - "Smart power: A National Infrastructure Commission Report (2016)"

It is worth noting that the UK's interconnection targets whilst supported by CEF funded studies, have been primarily driven by the UK Government and UK regulator through the "Cap and Floor" regulatory mechanism⁴. Therefore the UK's participation in interconnection targets is not essential for a continued relationship with the IEM, but would be welcome as a political statement of support for creating a stable investment scenario for the continued development of the physical infrastructure IEM.

The software

It is important to note that the flow of energy between the UK and the EU will not discontinue on 29 March 2019, as this is based on commercial contracts between market participants. However, the consequences will come with the potential for and perceived risks of regulatory divergence, which is already adding a risk premium, and could lead to reduced efficiencies and competitive differences if common rules between GB and the IEM do diverge. EURELECTRIC stresses the need for impacts of this to be assessed for the consequences in the long run.

Fundamentally the rules around the IEM can define what generator runs at any point in time, and impact the contractual relations related to capacity management and allocation as well as regional cooperation. This could have significant impacts on wholesale electricity prices and ultimately security of supply, as well as potential for the avoidance of cross-border social or environmental requirements. These potential impacts are amplified by the amount of interconnection capacity in place.

Those Network Codes and Guidelines that are already approved with the final codes awaiting adoption by the end of 2017 will be put into the post-Brexit legal framework. Whilst much of the Network Code and Guideline framework is in place for day-ahead coupling, there are cross-border intraday and balancing projects that the UK are actively participating in which may need to be legislated for in the future. The possible impacts on day-ahead and intraday market coupling, as well as balancing platforms need to be considered as it is difficult to assess what mechanisms will be in place should there be decoupling between the UK and the IEM.

Given these impacts, if similar rules are not in place to ensure the fair competition between generators at either end of interconnectors, the free trade of electricity and gas and the associated benefits will be diminished as the EU or the UK could look to limit these negative impacts through regulation, custom tariffs or even restrictions on the trade of gas and electricity.

Moreover, if the UK is to continue the free and fair trade of electricity and gas with the IEM without the jurisdiction of the European Court of Justice (ECJ) and without automatically applying relevant EU legislation, then two areas need consideration: **a non-domestic dispute resolution mechanism and a broader governance framework**.

Any UK-EU dispute resolution mechanism should aim at facilitating the free and fair trade of electricity and gas in a competitive and stable investment environment. Without a binding dispute resolution and enforcement mechanism, there is a jurisdictional gap and no guarantee agreed rules in a third country will be adhered to.

One existing solution could be that used for the EEA Agreement i.e. the Court of Justice of the European Free Trade Association (EFTA Court) and the EFTA Surveillance Authority. Other mechanisms could be considered, such as those for the EU-Switzerland bilateral agreements or the Energy Community Treaty. The lack of a solution to this jurisdictional gap could have the most

⁴ To unlock non-regulated investment in interconnectors Ofgem's "Cap and Floor" approach agrees the minimum and maximum revenue an interconnector developer can earn over 25 years.

disruptive near term unintentional impacts, in particular the unintentional split of the Single Electricity Market (SEM) in Ireland and Northern Ireland and a 2019 exit from the EU ETS by the UK.

On the broader governance framework, EURELECTRIC would welcome the continued participation of UK actors in ENTSO-E, the new EU DSO entity and ACER (ref. legislative rules contained within the Electricity Regulation and ACER Regulation). This would prevent divergence in terms of regulatory oversight in the long-run thereby preventing unnecessary barriers to cross-border trade. The UK TSOs and national regulatory authorities have brought significant technical and regulatory expertise to help develop the IEM, and this expertise to further develop the IEM should continue to be welcomed as long as appropriate administrative costs are covered.

The specific requirements that would need to be in place for an IEM agreement with a third country, should at least include the main obligations of the IEM legislation noted above, alongside equivalent state aid rules, linked carbon trading mechanisms, financial regulation and environment rules.

EURELECTRIC welcomes the UK's continued engagement in the EU legislative process and commitment to implement all of the legislation agreed whilst the UK remains a Member State. Doing so in a constructive way will aid the possibility that the UK will maintain a strong as possible energy relationship with the EU in the future.

2. What is the impact on the Single Electricity Market (SEM) between Ireland and Northern Ireland

Current scenario

The Single Electricity Market merges the wholesale markets in Ireland and Northern Ireland into a common arrangement. Agreement to permit the regulatory authorities in both jurisdictions to do this was established under a bi-lateral but non-legally binding Memorandum of Understanding between the UK and Irish Governments. Domestic legislation has been adopted in both Ireland and Northern Ireland to give effect to the necessary regulatory arrangements within the framework of EU legislation covering the internal electricity market. This parallel legislation has established the Single Electricity Market Committee (SEMC) as the decision-making authority for all SEM matters. Decisions of the SEMC are final and must be adopted by the individual regulatory authorities.

Thus, resolving the multiple challenges identified so as to ensure continued free and fair trade in electricity and gas between the UK and the IEM will be a necessary but not sufficient requirement to preserve the SEM between Ireland and Northern Ireland. Even in its current format the governance and accountability frameworks for the SEMC are weak compared to that of the participating regulatory authorities. In particular, and notwithstanding its sole decision-making prerogative, it is not accountable as a body to any external entity. Further, there is no provision to appeal a decision of the SEMC on merit in Ireland. It should be noted that currently there is also close alignment between the retail markets in Ireland and Northern Ireland.

Trading across interconnectors is a voluntary arrangement between parties within a defined set of rules. Participation in market places is a mandatory legal obligation on parties to comply with the rules of that market, including those established by legislation at domestic and EU level. Consequently, the nature of grievances between parties and dispute resolution process differ

fundamentally between simple trading arrangements and active market participation. Therefore, as the UK becomes a third country and moves outside the common EU jurisdictional framework, the continued operation of this integrated wholesale market on the island of Ireland will require detailed consideration if market participants are to be provided with legal and regulatory certainty, transparency and visibility as regards future investments. This will require additional legislative, jurisdictional, governance and administrative structures over and above those arrangements established to address free and fair trade between the UK, Ireland and the EU.

Why is this important when it comes to Brexit?

Both the UK and EU have stated in their respective negotiating documents the importance they attach to addressing the particular situation of Ireland including in terms of the continuation of existing bi-lateral agreements and the transit of goods. They also highlight the need to preserve the Northern Ireland Peace Process of which the SEM is a positive manifestation. More practically, the SEM provides customers in Ireland and Northern Ireland with significant economic benefits that would not otherwise be delivered and enhances security of supply in both jurisdictions. These are important considerations for Ireland given the overall impact of Brexit on its economy.

What has been said on energy by the UK Government?

The UK Government's Brexit White Paper – 2 February 2017

"With respect to energy, EU legislation underpins the coordinated trading of gas and electricity through existing interconnectors with Member States, including Ireland, France, Belgium and the Netherlands. There are also plans for further electricity interconnection between the UK and EU Member States and EEA Members. These coordinated energy trading arrangements help to ensure lower prices and improved security of supply for both the UK and EU Member States by improving the efficiency and reliability of interconnector flows, reducing the need for domestic back-up power and helping balance power flows as we increase the level of intermittent renewable electricity generation. We are considering all options for the UK's future relationship with the EU on energy, in particular, to avoid disruption to the all-Ireland single electricity market operating across the island of Ireland, on which both Northern Ireland and Ireland rely for affordable, sustainable and secure electricity supplies."

UK Government (2017) - The UK Government's exit from and new partnership with the EU - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/589191/The_United_Kingdoms_exit_from_and_partnership_with_the_EU_Web.pdf

The UK Prime Minister's Article 50 Notification letter – 29 March 2017

"...we also propose a bold and ambitious Free Trade Agreement between the UK and the EU. This should be of greater scope and ambition than any such agreement before it so that it covers sectors crucial to our linked economies such as financial services and network industries. This will require detailed technical talks, but as the UK is an existing Member State, both sides have regulatory frameworks and standards that already match. We should therefore prioritise how we manage the evolution of our regulatory frameworks to maintain a fair and open trading environment, and how we resolve disputes."

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/604079/Prime_Ministers_letter_to_European_Council_President_Donald_Tusk.pdf

Annex to the Council Decision authorising the opening of negotiations – 15th May 2017

"... Existing bilateral agreements and arrangements between Ireland and the United Kingdom, such as the Common Travel Area, which are in conformity with EU law, should be recognised. The Agreement should also address issues arising from Ireland's unique geographic situation, including transit of goods (to and from Ireland via the United Kingdom)."

[EU Council negotiating directive -
http://www.consilium.europa.eu/en/meetings/gac/2017/05/Directives-for-the-negotiation-xt21016-ad01re02_en17_pdf/](http://www.consilium.europa.eu/en/meetings/gac/2017/05/Directives-for-the-negotiation-xt21016-ad01re02_en17_pdf/)

3. What is the impact on the EU's energy and climate frameworks?

Current scenario

The EU's 2030 climate and energy targets were agreed at the European Council meeting in October 2014. These targets included a greenhouse gas reduction target of 40% on 1990 levels, a binding EU wide target of 27% of final energy to come from renewables and an indicative 27% improvement in energy efficiency at an EU level from Business As Usual (BAU) projections.

The EU's greenhouse gas target for 2030 is being implemented through revision of the ETS Directive and the proposed Effort Sharing Regulation (ESR), which shares the non-ETS target amongst the 28 Member States into nationally binding targets. The renewables and energy efficiency targets are being put into legislation through the recently proposed Clean Energy for All Europeans Package, where the Commission has since proposed increasing the energy efficiency target from 27% to 30%, as well as making it binding on the EU.

To ensure reporting on the progress targets can be streamlined and improve coordinated long term planning the Commission has proposed an Energy Union Governance Regulation. All of the legislation to implement the EU's 2030 climate and energy targets is expected to be agreed whilst the UK is still an EU Member State.

Why is this important when it comes to Brexit?

Whilst the UK's continued participation in the EU's energy and climate framework would be welcomed, it is not fundamental to the functioning of the IEM. However, there would be an expectation that the UK would continue to meet political commitments made by the UK Government on the 2030 climate and energy targets.

If political agreements on renewables, energy efficiency or non-ETS targets were not to be maintained they could mean a recalculation of the EU's percentage targets or a change in the quantity of reductions required to match the existing percentage targets. Maintaining the percentage targets would mean the rest of the EU must do more on non-ETS greenhouse gas emissions, and possibly less on renewable energy as UK is below the average in renewable energy deployment in Europe.

In particular, any shortfall in the 2030 EU renewable target would likely need to be met by cross-border collaborative projects, and increased offshore wind in the North Sea as part of a more integrated offshore grid could present a particular opportunity of benefit to the UK and the EU. As such EURELECTRIC would welcome the UK continuing to collaborate towards the EU's energy and climate goals.

4. What is the impact on EU Emissions Trading Scheme (ETS)?

Current scenario

The EU's Emission Trading Scheme (EU ETS) currently covers 11,000 installations from the electricity and industrial sectors across the EU as well as the EEA (Iceland, Liechtenstein and Norway) representing over half of the EU's emissions. Of the 11,000 participants covered by the EU ETS, in the region of 1,000 are in the UK, currently representing around 8-9% of emissions⁵.

The UK has played a leading role in the origins and development of the EU ETS, and is a major advocate of carbon trading on the global stage. The UK and the EU should look to continue the collaboration on climate diplomacy to close the global emissions gap to the long term temperature targets in the Paris Climate Change Agreement.

To ensure the free and fair trading of electricity EURELECTRIC views that equivalent carbon costs should be applied to electricity generation that freely trades within the pan-European market, preferably through participation in the EU Emissions Trading Scheme (EU ETS) or a directly linked trading scheme.

Whilst a tax has some benefits for third countries connecting to the IEM, if the objective is to have equivalent carbon costs, a tax would not be flexible enough to respond to fluctuations in a traded scheme and invariably be above or below the EU ETS price at any given time. However, any additional tax solutions linked to the variations in price of the EU ETS are acceptable for EURELECTRIC, and are more cost-effective than regulatory interventions.

The risk that the UK will undercut the IEM on carbon costs is minimal, given the UK's legally binding Climate Change Act and domestic Carbon Price Floor which currently adds £18 (~€21) to electricity generation on top of the EU ETS.

EURELECTRIC would support the UK's continued participation in the EU ETS, particularly as it has been closely involved in its Phase IV (2021-30) governance and has made political commitments to help facilitate innovation and modernise the energy infrastructure of lower-income Member States through the innovation and modernisation funds.

It is important to note that if the UK does not remain in the Single Market or the Internal Energy Market, it could still participate in the EU ETS. Iceland, Liechtenstein and Norway participate in the EU ETS under the jurisdiction of the EFTA Court (instead of the ECJ), and current rules provide for the possibility of mutual recognition of allowances between EU Members and third countries. Indeed, the EU and Switzerland had agreed a linking agreement between the EU ETS and the Swiss ETS, although the political disagreement on other matters has delayed this agreement from being implemented.

Why is this important when it comes to Brexit?

If the UK was to leave the EU ETS, there would be a direct impact on the EU ETS price. As a legislative commodity, it could lead to approximately 8-9% of demand disappearing overnight. To mitigate for this, the supply of allowances in the EU ETS would need to be adjusted. However, there is no precedent on how this could be done and it could reopen political discussions surrounding the EU's 2030 climate and energy targets agreed in October 2014.

⁵ ICIS Whit Paper "[Brexit risks for the European carbon market](#)"

Uncertainty regarding continued UK participation or linkage to the EU ETS would also indirectly impact markets where the EU ETS is an input cost, including electricity. This is because electricity generators in the UK will not know whether they will need to acquire allowances to hedge their production post 2019 which in general is being sold up to 3 years or more ahead of delivery. Therefore, unless the uncertainty of the UK's participation in the EU ETS is resolved, this will increasingly have a direct impact on the trade of gas electricity with Great Britain for delivery beyond March 2019.

This has particular implications for the Single Electricity Market (SEM) between Ireland and Northern Ireland. As noted above, absent clarification of the UK's intent, Generators in Northern Ireland will not know their position in relation to the EU ETS come March 2019. However, electricity suppliers across the SEM will be looking to enter into contracts beyond this point.

The severity of these impacts would depend on the lead time ahead of any UK exit from the scheme, and what happens to the UK allowances in the event of a UK exit from the EU ETS.

Figure 3 outlines the prospective price impacts of a UK exit from the EU ETS in either 2019 or 2021 (blue lines), and whether a decision is made in either October 2017 or October 2018 (yellow lines). The near term concern for EURELECTRIC is the possible downsides caused by market sentiment reacting to a disorderly UK exit, and analysis from ICIS suggests the EU ETS could drop below €2 in 2018.

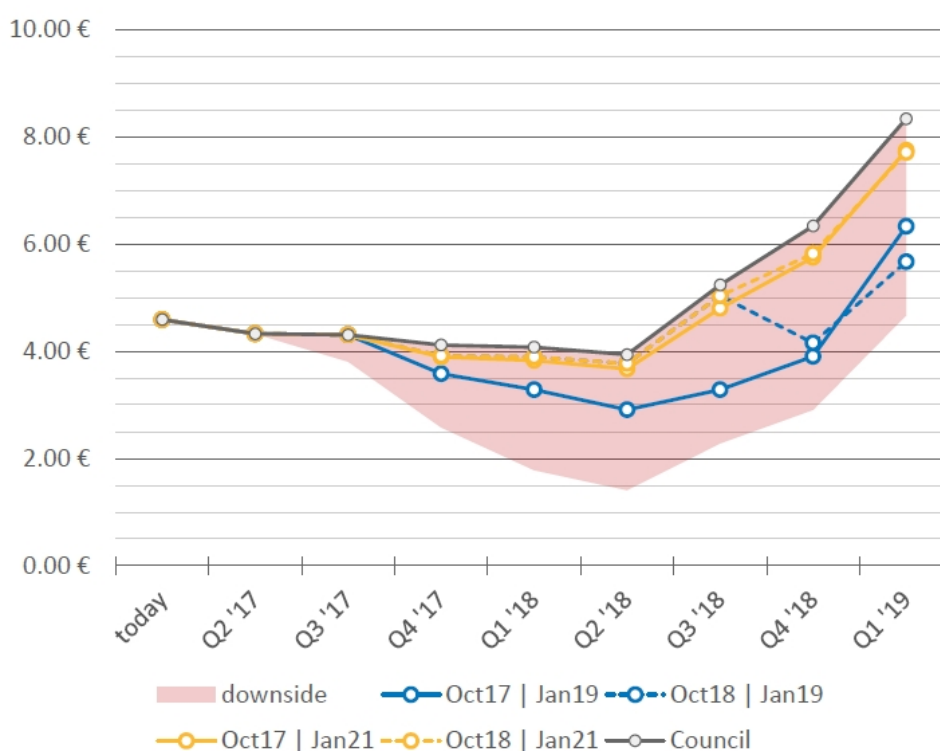


Figure 3. Impact of timing and lead time of a UK exit from the EU ETS (ICIS 2017)

To prevent the near term impacts of a disorderly 2019 exit with only 6 months' notice, agreement on the UK's participation in the EU ETS for the remainder of Phase III (end of 2020) will be required as early as possible. The main barrier for the UK's continued participation for the remainder of Phase III will be the continued role of the ECJ during any transitional arrangements. If a solution to this potential jurisdictional gap is not agreed by October 2017, then it will increasingly impact the behaviour of EU ETS market participants and related markets.

The longer-term issue for EURELECTRIC is what happens to the UK allowances due to come on to the market in the event of a UK exit from the EU ETS. The easiest solution would be to adjust the entire Phase IV cap (2021-30), however, under the ETS Directive there is no automatic recalibration of the cap if a country leaves. Even in this scenario, there would be changes to supply-demand dynamics over Phase IV.

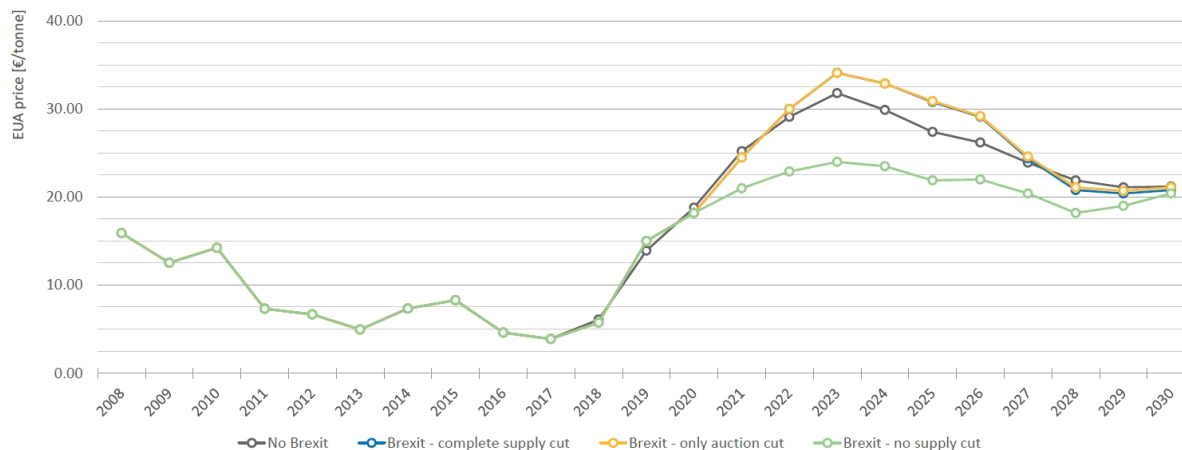


Figure 4. Impact over Phase IV of a UK exit from the EU ETS – Without supply adjustments (ICIS 2017)

If there was a complete removal of the UK share of allowances for auctioning, free allocations and a proportional share of funds, then given the UK is expected to be a net- supplier of allowances in the 2020s, it would have an upward impact on the EU ETS price (the yellow line in Figure 4). However, if the EU ETS is not adjusted to remove UK allowances, in particular the auction allowances, then this would lead to a significantly depressed EU ETS price over the next decade (green line in Figure 4).

Even if the EU ETS is adjusted to remove UK allowances, and there is a slight increase in the EU ETS price, the absolute monetary value received by the eligible Member States from the Modernisation Fund would decrease as the absolute number of allowances in the fund would be reduced as it is based on relative figure of the overall cap (2%). Likewise, the number of allowances distributed for solidarity purposes would be impacted as they are also based on a relative figure.

To the same effect, if the EU ETS was proportionally adjusted following a UK exit, the overall monetary value of the innovation fund would also reduce. However, as the UK would lose access to the fund, this would offset any impacts for EU participants. Although continued collaboration with the UK on energy innovation is still valuable for other reasons, EURELECTRIC views that all participant countries in the EU ETS should have access to the innovation fund as they are in effect contributing to the fund.

Given the above, the most disruptive impacts, irrespective of the wider relationship between the UK and the EU, would arise should the UK leave the EU ETS before the end of Phase III (end of 2020). Given this potential outcome is now less than two years away, a resolution to prevent this scenario should be agreed as soon as possible.

Given the Phase IV (2021-30) impacts on the market and funds, EURELECTRIC would have a clear preference for the UK to remain in the EU ETS at least for the next trading Phase (end of 2030). If the UK opts to leave the EU ETS, then for the purposes of the free and fair trading of electricity a linked UK ETS of similar ambition and rules and whose units were tradable 1:1 with EUAs would be required.

5. What could be the impact of financial regulation on commodity trading and associated treasury hedging?

Current scenario

Financial products and markets play particularly a central role for the hedging of risks within the energy sector. This is done mainly via commodity derivatives but also treasury risks such as currency risk and interest risk, which are generally being hedged by the energy industry. A significant part of the trading venues (mainly brokers) used for this purpose are located in the UK; this is why the status of these trading venues in particular is very relevant for the energy industry.

EU passport regime of financial legislation

There are a range of provisions across many different pieces of EU financial regulation, which allow firms in Member States to provide financial services across the EU under a common set of rules and a single authorisation from their home regulator – these are often referred to as financial services passports according to the Markets in Financial Instruments Directive (MiFID). Not many energy companies are in fact subject to a MiFID license or have chosen to apply for a license for other strategic reasons. Nevertheless, energy companies benefit in general from the passport regime either directly as some energy groups have a MiFID license or indirectly as banks can provide services on behalf of the energy companies and/or on their own behalf.

It is worth noting that there are provisions that allow firms from third countries to offer services across the EU, provided that their relevant domestic regulations have been deemed equivalent to those of the EU. Whether regulatory equivalence will be fulfilled has yet to be seen but UK has expressed an intention that for the freest possible trade in financial services between the UK and EU Member States.

The regulatory difference between trading a financial instruments or not

When a transaction fulfils certain criteria, especially if it is traded on regulated trading platform, it is deemed a financial instrument (according to MiFID). This implies that several other pieces of financial regulation need to be observed. For example energy firms need to observe position limits, they are subject to capital requirements, to obligations on market surveillance, to requirements related to benchmarks, margin and clearing requirements, as well as a wide variety of reporting obligations⁶. Consequently, there is an incentive to avoid trading a transaction being a financial instrument or to meet the criteria of been exempted from some of the requirements.

⁶ According to MiFID II (Reg. 600/2014 and Dir. 2014/65), Capital Requirement Regulation (Reg. 575/2013), Market Abuse Regulation (Reg. 596/2014), Benchmark Regulation (Reg. 2016/1011), EMIR (Reg. 648/2012), and Financial Transaction Tax.

What has been said on financial regulation by the UK Government?

The UK Government's Brexit White Paper

"In our new strategic partnership agreement we will be aiming for the freest possible trade in financial services between the UK and EU Member States.

In highly integrated sectors such as financial services there will be a legitimate interest in mutual cooperation arrangements that recognise the interconnectedness of markets, as so clearly demonstrated by the financial crisis. Since that time, the EU has taken a number of steps to strengthen collective oversight of the sector. As the UK leaves the EU, we will seek to establish strong cooperative oversight arrangements with the EU and will continue to support and implement international standards to continue to safely serve the UK, European and global economy."

The UK Government's exit from and new partnership with the EU, 2nd February 2017 -

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/589191/The_United_Kingdoms_exit_from_and_partnership_with_the_EU_Web.pdf

Why is this important in terms of Brexit?

Maintenance of a common financial regulatory framework is important because of two reasons. Firstly, currently a significant volume of energy trading in Europe takes place at UK based broker platforms, which in fact are so-called non-MTF platforms with products traded not being qualified as financial instruments. And secondly the exemptions of financial instruments are tied to whether a transaction takes place in or outside of the EU.

From January 2018, under new rules within MiFID II broker platforms will likely be regulated as Organised Trading Facilities (OTFs). However, MiFID II includes a so-called 'REMIT carve-out' for physically settled power and gas agreements traded at these OTFs, meaning **these trades are not financial instruments**. Though, if the UK is seen as a third country, continued UK based trading of physical gas and power may not be counted under the REMIT carve-out.

UK based energy brokers thereby will have an incentive to move operations from the UK to inside the EU, on top of incentives for banks to remain within the EU passport regime for financial services. The move of UK brokers may result in a temporary increase in transaction costs and reduction in liquidity, as platforms and/or the trading relocate from UK to elsewhere in the EU. However, in the longer run the impact is more uncertain.

Nevertheless, a possibility is that Brexit may result in the UK and competing financial centres developing more 'attractive' financial regulatory frameworks to keep or attract the financial services industry. Such 'rivalry' might give reason for differences between UK and EU financial regulation. For European energy companies with operations in the UK having to comply with multiple regulatory regimes, this will add complexity and cost.

6. What could be the impact of the UK leaving the Euratom Treaty?

Current scenario

When the UK government laid down its domestic legislation necessary to trigger Article 50, it also confirmed that it will mean leaving the Euratom Treaty. Therefore, the UK will no longer belong to the European Atomic Energy Community when the UK leaves the EU.

The UK currently has 8.9 GW of installed capacity, with 15 reactors at 7 power stations that currently produce approximately 20% of its electricity generation. Almost half of this capacity is to be retired by 2025, with all but 1 station planned to close in the 2020s. The UK plans to replace it with 16 GW of new nuclear capacity, including the 3.2 GW Hinckley Point C which was confirmed last year.

What has been said on Euratom by the UK Government?

The UK Government's Brexit White Paper

*"As the Prime Minister has said, we want to collaborate with our EU partners on matters relating to science and research, and nuclear energy is a key part of this. So our precise relationship with Euratom, and the means by which we cooperate on nuclear matters, will be a matter for the negotiations – **but it is an important priority for us** – the nuclear industry remains of key strategic importance to the UK and leaving Euratom does not affect our clear aim of seeking to maintain close and effective arrangements for civil nuclear cooperation, safeguards, safety and trade with Europe and our international partners. Furthermore, the UK is a world leader in nuclear research and development and there is no intention to reduce our ambition in this important area. The UK fully recognises the importance of international collaboration in nuclear research and development and we will ensure this continues by seeking alternative arrangements."*

The UK Government's exit from and new partnership with the EU, 2nd February 2017 -

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/589191/The_United_Kingdoms_exit_from_and_partnership_with_the_EU_Web.pdf

The Euratom Treaty governs the supply of nuclear fuels (ores, source materials and special fissile materials) to and from Member States and established the Euratom Supply Agency (ESA) to ensure a regular and equitable supply of nuclear fuels to users in the EU. ESA is also tasked to conclude supply contracts for nuclear fuels and to monitor transactions involving services in the nuclear fuel cycle (enrichment, conversion and fuel fabrication). Furthermore, all the nuclear materials in the UK covered by the Euratom Treaty legally belong to the Euratom Community.

Why is this important when it comes to Brexit?

As with other sectors, UK leaving the EU will have an impact on the free movement of goods and skills in the nuclear sector, which is one of the objectives of the Euratom treaty. More specifically, the UK leaving the Euratom Community may result in an interruption to normal trade with the EU, impacting both the UK and the remaining EU27.

Research on nuclear energy will also be impacted as Euratom provides a joint platform for R&D covering both fission (mainly related to safety, radioactive waste and decommissioning) and fusion, as well as sharing of information and results from R&D activities.

As far as safety and safeguard issues are concerned, it is important to underline that leaving Euratom would not result in safety concerns for the UK nuclear industry, as the UK has a robust and well established domestic civil nuclear regulator and safety regime. On leaving Euratom, the UK would need to set up the proper framework to comply with its international nuclear safeguards commitments, possibly relying on IAEA rather than Euratom safeguards inspectors.

To prevent a cliff edge, EURELECTRIC would welcome transitional arrangements to give enough time to negotiate and complete new cooperation agreements with the EU as well as with third countries and/or international institutions (IAEA) to preserve the objectives of the Euratom Treaty as far as nuclear trade is concerned.

EURELECTRIC would welcome the UK continuing to participate in Euratom in a new relationship in the future.

7. What could be the impact on the gas supplies from Brexit?

Current scenario

The electricity industry is a major consumer of imported primary fuels, notably natural gas. Whilst not necessary for the trade of electricity, ensuring secure and diverse supplies of gas is required for the electricity sector across Europe. Whilst regulatory harmonisation may be less important to the trade of gas than electricity and there are greater international options through LNG, as a physically networked industry that has geopolitical challenges, it is important that the UK and the EU continue to collaborate on gas supplies. Whilst there are other primary fuels used by the electricity industry in both the UK and the EU, such as coal or biomass, Brexit will have a limited impact on their supply.

Like the electricity market, EU policy around the Internal Gas Market (IGM) covers the Hardware – the physical infrastructure, and the Software – the regulatory framework that ensure that free cross-border trade can operate efficiently. Unlike the electricity market, developing the hardware is more critical than the software.

Gas and electricity have a common EU policy to develop the physical infrastructure of the Internal Energy Market, the Connecting Europe Facility (CEF) for Energy, which helps deliver the EU's Projects of Common Interest (PCI) under the Trans-European Networks for Energy (TEN-E) Regulation.

The software of the Internal Gas Market (IGM), as with electricity, is governed by the Gas Regulation and Gas Directive, which put in place the necessary market structures and governance framework with harmonised technical regulatory rules implemented through the set of EU gas Network Codes. As with electricity market, the IGM legislation has helped develop liquid gas markets, which has benefitted electricity consumers.

A particularly important piece of EU legislation from a gas perspective is the Security of Gas Supply Regulation, which is currently undergoing a revision which will be adopted this year. EU security of gas supply legislation has brought a valuable coordinated approach across borders and ensured that supplies of gas have continued to flow to where it is most needed.

The UK plays an important role in EU security of gas supply through its North Sea gas sources, gas storage and transmission capacities, as well as LNG import capacity. Likewise the UK is increasingly reliant on the rest of the EU as a source of flexibility, both in terms of diversity of supplies from the exporters to the South and East of Europe as well as shared storage capacity, in a context of declining domestic production.

As with electricity, a particular focus should be given to the supplies of gas to the island of Ireland, which is heavily dependent on the UK for supplies of gas. Whilst it is technically possible for Ireland to be self-sufficient in electricity – although at a cost – it is not the case with gas without significant investment in LNG import capacity and increase storage capacity.

Why is this important when it comes to Brexit?

From the perspective of electricity consumers in the UK and the EU, continued development of physical gas infrastructure across Europe, harmonisation of regulatory rules and coordinated efforts of security of supply at regional level have clear benefits for consumers across the EU.

Whilst not an obvious requirement for third country agreement with the IEM, there are benefits to both UK and EU electricity consumers for the UK and EU to cooperate on gas supplies, particularly for those in Ireland. As such, EURELECTRIC would support mirrored measures as it has called for on electricity to be expanded for gas. This should include the hardware and software elements of the Internal Gas Market, the as well as the cooperation on security of gas supply. EURELECTRIC observes that the revised Security of Gas Supply Regulation defines a set of numerous risk groups of Member-States for implementation of regional cooperation. Yet, UK is included in 2 North Sea risk groups and notably into the Norwegian corridor group jointly with 11 other countries (Ireland included).

If the UK does not adopt EU security of gas supply legislation, regional cooperation within such risk groups should not be hampered and a minimum a bilateral agreement between the UK and Ireland will need to be agreed to ensure gas supplies are guaranteed to the island of Ireland. The EU should also look at assistance it can provide to improve security and diversity of gas supply to the island of Ireland.

ANNEX I

Main relevant legislations:

- Treaty on the Functioning of the European Union (TFEU);
- Electricity Regulation (TBC, Regulation (EU) 714/2009 being revised);
 - Electricity Network Codes – 3 connection codes; 4 market codes; and 4 system operation codes
- Electricity Directive (TBC, Directive 2009/72/EC being revised);
- Wholesale Energy Market Integrity and Transparency Regulation – REMIT (Regulation (EU) 1227/2011);
- ACER Regulation (TBC, Regulation (EU) 713/2009 being revised);
- Trans-European Networks for Energy (TEN-E) Regulation (Regulation (EU) No 347/2013);
- Electricity Risk Preparedness Regulation (TBC, Directive 2005/89/EC being revised);
- Industrial Emission Directive – IED (Directive 2010/75/EU);
- Large Combustion Plant Directive – LCPD (Directive 2001/80/EC);
- Medium Combustion Plant Directive – MCPD (Directive (EU) 2015/2193);
- National Emission Ceiling Directive – NECD (Directive 2016/2284/EU);
- Emissions Trading Scheme (ETS) Directive (Directive 2003/87/EC being revised);
- Renewables Directive (Directive 2009/28/EC being recast);
- Energy Efficiency Directive (Directive 2012/27/EU being revised);

EURELECTRIC pursues in all its activities the application of the following sustainable development values:

Economic Development

▶ Growth, added-value, efficiency

Environmental Leadership

▶ Commitment, innovation, pro-activeness

Social Responsibility

▶ Transparency, ethics, accountability



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