



Running out of steam? Brexit and the future of EU energy policy

Aurélie Faure-Schuyer | Research Fellow in European Energy and Climate Policy, based in Brussels

Theme

This Elcano-IFRI analysis examines some of the main challenges that Brexit might pose to the future of energy policy in Brussels and London. It provides a perspective on the UK's energy and climate policy choices and the key contribution of the UK to the EU's energy and climate policy.

Summary

Britain's vote in favour of Brexit has far reaching consequences not only for the future of energy policies in the UK and the EU-27, but also on global energy and climate policies. Together with other countries outside the EU, the UK has been a key contributor to the design of the EU's 2030 energy and climate goals. However, Brexit creates a new situation whereby the UK, a traditional energy importer, will have to realign its domestic energy and climate policy goals to the new situation. In this context, it also remains to be seen whether the EU can hinge upon an ambitious international climate policy to compensate for the British exit. A 'hard Brexit' does not seem the most advantageous option for either parties.

Analysis

The EU's energy agenda revolves around three broad themes: liberalisation, energy security and decarbonisation. The UK has been at the forefront of the EU's drive for energy market liberalisation, and has also left an important mark in the Union's road towards decarbonisation agenda, by pushing for a shift from a renewables-based policy to one emphasizing low carbon technologies.

In turn, the EU framework can help Britain mitigate some of the challenges related to its own increasing dependence on energy imports. The energy sector's contribution to Britain's Gross Domestic Product (GDP) has been in steady decline as a result of the phasing out of oil and gas extraction in the North Sea.^{1 2} Perhaps more importantly, Britain displayed a 'net import dependency' rate of 46% in 2014, going back to levels not seen since the 1970s, when it began to exploit its upstream oil and gas reserves.

¹ The energy sector's contribution to GDP declined from over 10% in the 1980s to 2.8% in 2014.

² National Statistics (2015), 'UK Energy Brief in 2015', Department of Energy and Climate Change, July, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/516837/UK_Energy_in_Brief_2015.pdf.

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Growing import dependency is likely to affect Britain's energy policy in at least two important ways. The first relates to the need to reinforce existing physical infrastructures. Britain is tied to the European continent through a 4 GW electricity interconnection³ and three main natural gas pipelines,⁴ and operates one of the largest natural gas markets: the National Balancing Point.⁵ The second consequence relates to the need to strengthen its links with energy policy developments within the EU and beyond, ie, globally.

Britain's decision to exit the EU –Brexit– raises a number of questions about the future of energy policy in both the EU and the UK and about the desired level of cooperation between the latter and the EU-27 (minus Britain) in the energy area. Over the past two decades the UK, along with Denmark and Sweden, has been an important contributor to the design and consolidation of the internal energy market rules, the promotion of increased interconnections (one deficit of European energy policy) and the Energy Union Proposal.

This Elcano-IFRI analysis examines some of the main challenges that Brexit might pose to the future of energy policy in Brussels and London, and warns of the perils of a 'hard Brexit' in the energy domain. Flexible arrangements offer the best way forward. After all, Britain has played a leading role in driving forward the consolidation of the EU's energy market rules, and its input will continue to be welcome. It is difficult to imagine a success of the EU energy market without Britain and other countries outside the EU, such as Norway or Switzerland. Through gas and electricity interconnections these neighbours add much-needed steam to the EU's energy market.

Britain's future energy policy options

Following concerns associated with scarcity in electricity generation, Britain began a process of renationalising its domestic energy market in the late 1990s.⁶ This move towards re-regulation was formalised under a schedule for the closure of Britain's coal-based electricity generation capacity, and a programme to invest in nuclear energy.^{7 8} The Electricity Market Reform (Energy Act 2013) outlined a number of options to prepare Britain for its transition to a new low-carbon energy system architecture in 2030 and beyond. For instance, the North Sea could draw on unexploited potential, with depleted natural gas fields being considered for storing compressed air or for carbon capture

³ France (2GW), Netherlands (1 GW), Northern Ireland (500 MW) and the Republic of Ireland (500MW).

⁴ The Interconnector to Belgium, the BBL to the Netherlands and Moffat to the Republic of Ireland.

⁵ For European gas hubs see <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2013/10/NG-79.pdf>.

⁶ Royal Academy of Engineering (2013), 'GB electricity capacity margin. A report by the Royal Academy of Engineering for the Council for Science and Technology', October, <http://www.raeng.org.uk/publications/reports/gb-electricity-capacity-margin>.

⁷ Insight_E (2016), 'The impact of a UK and German coal phase out on the electricity mix and CO2 emissions in Europe', April, http://www.insightenergy.org/system/publication_files/files/000/000/045/original/HET14_Coal_Phaseout_Final.pdf?1474967926.

⁸ See the forthcoming Elcano Paper 'The UK's nuclear policy'.

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storage facilities⁹. However, Britain's transition to a low-carbon energy system would require significant investments in the electricity interconnection with France and close cooperation, in both gas and electricity, with other European countries such as the Netherlands, Norway and Belgium.¹⁰

The benefits of EU-UK cooperation run both ways. Indeed, Britain's energy sector can be an asset to its own economic competitiveness and to the enlarged internal EU market. In particular, Britain's Electricity Market Reform has benefitted from relatively low energy prices compared with the rest of the EU. Between 2008 and 2012 electricity and gas prices rose at a slower pace than PPI levels in the UK, and energy-grid related costs grew at a slower pace than in the rest of the EU-28. In the field of carbon taxation, a carbon floor of £18/tonne of CO₂e¹¹ was implemented in April 2015 to ensure a certain level of technology substitution (out of highly emitting coal plants) and climate policy efficiency, while contributing to the Finance Minister's budget. The floor has so far not been possible to implement as an EU policy¹² –since carbon pricing is considered a market-based instrument and not a taxation mechanism–. In the UK several reports acknowledge the fact that carbon leakage (mainly the outsourcing of industrial manufacturing and greenhouse gas emissions outside Britain) has been an issue since 2014. The question would now have to be considered bilaterally between the UK and the EU-27. As for the British economy, outsourcing of industrial manufacturing is indeed to be considered a negative outcome, both with or without Brexit.

Still, the Climate Change Act 2008 states that the UK must cut its carbon emissions by 80% over 1990 levels by the year 2050 and that it is required to set 'carbon budgets' every five years. The UK's commitment to climate policy is ambitious. Meanwhile, such a degree of ambition also needs to be benchmarked against other trading partners (eg, the US, India and China) in climate policy, where the UK has been at the forefront of policy developments.¹³

The UK's contribution to European energy policy

Britain and the EU-27 have strongly intertwined energy relations. These are entrenched in the internal energy market and the Energy Union, a policy framework designed to achieve the EU's 2030 energy goals of at least 27% renewables in primary energy and a 40% reduction in greenhouse gas emissions compared with 1990.

⁹ Kate Cummins (2011), 'Compressed air energy storage has bags of potential', *The Engineer*, 25/IV/2011, <https://www.theengineer.co.uk/issues/25-april-2011/compressed-air-energy-storage-has-bags-of-potential>.

¹⁰ See https://consultations.entsoe.eu/system-development/regional-investment-plans/user_uploads/regional-investment-plan-2015---rg-ns---for-consultation.pdf-9.

¹¹ €25/tonne of Co₂ equivalent.

¹² Carbon taxes exist in different EU Member States. Sweden and Denmark were the first to introduce them, in 1991 and 1992, respectively.

¹³ Nicholas Stern (2006), *The Economics of Climate Change – The Stern Review*, http://webarchive.nationalarchives.gov.uk/20100407172811/http://www.hm-treasury.gov.uk/stern_review_report.htm.

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Long and winding? Britain, the EU and the road to European energy liberalisation and security of supply

The first idea of a European internal energy market, raised in the European Commission in 1988, suggested a new approach to energy trade in Europe compared with the traditional taxation of the economic rent in energy markets.¹⁴ A move towards the US and Canadian federal models¹⁵ was promoted at the time but confounded by the EU's move towards intergovernmental decision-making after the 1992 Maastricht Treaty.

Liberalisation of the energy markets was effectively undertaken in the early 2000s with the creation of an internal energy market, under the liberal impetus of the UK.¹⁶ This liberal approach was regarded, in the institutions' policy language, as the best answer to challenges raised by the lack of competitiveness and potential threats to the EU's primary energy supply, which was historically anchored to three main natural gas suppliers: Russia, Norway and Algeria.

As disagreements emerged during the commercial negotiations between Gazprom and its European natural-gas partners (the 2006, 2009 and 2015 'gas crises')¹⁷ over the conditions of natural-gas transit through Ukraine and the price of imported natural gas at the EU border, the EU went back to one of its initial goals, as envisaged in the Lisbon Treaty, of ensuring the security of supply.¹⁸ A new European Energy Security Strategy¹⁹ was published in 2014, supporting the new energy policy legislation under the Energy Union's Clean Energy for All Europeans Package²⁰ published in late November 2016. In the November 2016 electricity legislation and other pending legislative developments, the energy security dimension (the security of gas supply regulation²¹ –risk preparedness

¹⁴ Joanne Evans & Lester C. Hunt (Eds.) (2009), *International Handbook on the Economics of Energy*, Edward Elgar Publishing, Cheltenham.

¹⁵ European Commission (1988), 'The Internal Energy Market', Commission working document, COM (88) 238 final, 2/V/1988, <http://aei.pitt.edu/4037/1/4037.pdf>.

¹⁶ Philip Lowe (2006), 'The Liberalisation of EU Energy Markets', The Beesley Lectures, Institute of Economic Affairs, The Royal Society, London, http://ec.europa.eu/competition/speeches/text/sp2006_017_en.pdf.

¹⁷ James Henderson & Tatiana Mitrova (2015), 'The Political and Commercial Dynamics of Russia's Gas Export Strategy', The Oxford Institute for Energy Studies, Oxford, September, <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2015/09/NG-102.pdf>.

¹⁸ Art 194.1 of the Lisbon Treaty, <http://www.lisbon-treaty.org/wcm/the-lisbon-treaty/treaty-on-the-functioning-of-the-european-union-and-comments/part-3-union-policies-and-internal-actions/title-xxi-energy/485-article-194.html>.

¹⁹ European Commission (2014), 'European Energy Security Strategy', (SWD(2014) 330 final, <http://www.eesc.europa.eu/resources/docs/european-energy-security-strategy.pdf>.

²⁰ European Commission (2016), 'Clean Energy for All Europeans', COM(2016) 860 final, http://ec.europa.eu/energy/sites/ener/files/documents/com_860_final.pdf.

²¹ European Commission (2016), 'Proposal for a Regulation of the European Parliament and of the Council concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010', COM(2016) 52 final, <https://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-52-EN-F1-1.PDF>.

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in electricity—²² effort sharing directive)²³ has been reinforced, based on the solidarity principle of the Lisbon Treaty: the commitment of one Member State to provide assistance to another under specific emergency situations.

A shift to a low-carbon policy

Within the 2030 objectives and the Energy Union, the UK suggested a shift from a renewables-based policy –mainly wind generation– to a policy based on low-carbon technologies. The latter include nuclear generation, which contributed 19% of the UK's domestic electricity generation, and also fossil-fuel generation complemented with carbon capture and storage, or clean combined heat and power. According to each specific technology cost differentiation, new remuneration schemes –known contracts for differences– are included in capacity mechanisms' mid-term auction awards to 2020.²⁴ Contracts for differences²⁵ for low carbon technologies provide a fixed remuneration, with reference to the electricity pool price. They have an important effect of stimulation that facilitates the entry of new forms of technology into the electricity market under long term policy goals of decarbonisation.

A strong role in global climate policy

Along with the Council's decision to set a long-term target of an 80%-95% reduction in greenhouse gas emissions by 2050,²⁶ the EU's climate policy approach has had varying degrees of support from individual Member States; nevertheless, the UK has supported a high degree of ambition.

The main consequence of Brexit would be that a new (lower) EU-wide target for 2030 will need to be adopted as the UK is today largely contributing to the EU's target to bring emissions down by 40% by 2030. The same challenge would arise for the 2050 emissions reduction target of 80%-95% compared with 1990. Alternatively, other Member States may have to agree to provide effective compensation in terms of emission reductions.

Under Brexit, the UK would be subject to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris agreement, and would need to submit its own

²² European Commission (2016), 'Proposal for a Regulation of the European Parliament and of the Council on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC', COM(2016) 862 final, https://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v7.pdf.

²³ See https://ec.europa.eu/clima/policies/effort_en.

²⁴ 'Electricity Market Reform – Energy Act 2013', <https://www.gov.uk/government/collections/energy-act>.

²⁵ 'Planning our electric future: a White Paper for secure, affordable and low-carbon electricity', White Paper, July 2011, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48129/2176-emr-white-paper.pdf.

²⁶ European Commission (2011), *Energy Roadmap 2050*, SEC(2011) 1565 final), {SEC(2011) 1566 final} y {SEC(2011) 1569 final}, 15/XII/2011, https://ec.europa.eu/energy/sites/ener/files/documents/2012_energy_roadmap_2050_en_0.pdf.

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national emissions target and report on its objectives in line with international requirements (the Kyoto Protocol and the Paris Agreement).

An energy diplomacy action force

Within the Energy Union, the UK is in favour of the proposal of an external EU energy policy –under an energy diplomacy–. In March 2014, echoing the US, the UK took a firm diplomatic stance in the European Council in favour of economic sanctions against Russia. This diplomatic stance was also partly made possible by the fact that the UK's commercial interests in the energy market are relatively well protected as regards Eastern Europe²⁷ from a cut in natural gas imports, as shown by the results of the EU's energy stress tests.²⁸

For the EU, having the UK outside its diplomacy has important consequences. In the future of 'energy diplomatic relations' the main question is to what extent the UK and the EU-27 will compete for new energy supplies, or agree on a form of commercial coordination with each other. Overall, this might indirectly have an impact on the wider energy geopolitical energy balance.

Conclusions

Britain and the EU-27 countries are longstanding partners in the energy sector. The UK's decision to leave the EU will not remove these relations or negate the EU's internal legislative acquis as regards energy unless the negotiation process leads to a 'hard Brexit'. However, neither for the UK nor for the rest of the EU will a 'hard Brexit' seem a realistic option of implementing new forms of energy relations, since the latter will be based on links of commercial interdependencies. For both the EU and the UK the political cost of a 'hard Brexit' will be far too heavy.

In the mid-term, Brexit can have a dampening effect on key decisions in the European energy market regarding the interconnections between the UK and the continent. For the longer term, Brexit means that, in terms of size, the EU will distance itself from a large importer of primary energies –the fifth largest after Germany, France, Italy and Spain–.²⁹ However, regardless of a 'hard Brexit' scenario, the UK will remain a strategic energy partner, providing an advantage of size to the EU bloc and diversification to the European internal energy market. In political terms, the UK's geographic proximity to the North Sea will continue to provide a valuable counterbalance to Eastern natural gas imports and an important justification for the EU's security policy of shifting the patterns of natural gas trade flows to the North-South axis.

²⁷ The natural gas supply would be affected to the magnitude of less than 20% of demand in the event of Russia interrupting its supply during the Winter peak demand.

²⁸ Insight_E (2014), 'Strengths and Weaknesses of the European Union Security of Gas Supply', May, <http://www.stakeholderforum.org/fileadmin/files/HET%201-Strengths%20and%20Weakness%20of%20the%20EU%20security%20of%20supply.pdf>.

²⁹ Eurostat.

Ultimately, the consolidation of both the EU and the UK energy and climate policies over their international commitments is an important element to be watched. The UK's geopolitical ability to counterbalance the EU's Eastern dependency must be weighed against the bilateral energy dialogue with the US under its new Administration, the important TTIP negotiations and possible WTO discussions. In the field of climate policies, the EU-27 should try not to be only an 'aspirational' leader for other countries but to ensure an effective mitigation action under its reduction emission targets for 2050.

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