



Energy justice beyond borders? Exploring the impact of Brexit on Ireland's all-island energy market[☆]

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ABSTRACT

Northern Ireland is part of the United Kingdom, which has left the European Union under the terms of Brexit. The Republic of Ireland is an EU Member State that has remained within the EU. The island of Ireland operates an all-island energy market, and the impact of Brexit on these complex transboundary energy arrangements has been largely overlooked. This study analyses and assesses the significance of Brexit for Ireland's all-island energy market so that the complexities underlying these transboundary circumstances, and the Brexit-related factors acting on them, can be better understood. An energy justice framework is employed that emphasises the consideration of potential distributional, recognitional and procedural injustices in this setting, and that assists in drawing out potentially negative impacts of Brexit on the all-island energy market.

1. Introduction

Justice concerns are often viewed from the prism of national political boundaries. The island of Ireland (herein referred to as "Ireland") is a case in point. The island has a complex political and social history webbed in conflict and reconciliation (Bartlett, 2018). This conflict, for the most part, has not been concerned with energy systems or services, which by the nature of their infrastructure and trade dependencies, often highlight tensions around national boundary-setting. Indeed, an overlooked dimension of Ireland's increased cross border cooperation lies in the field of energy, where a common electricity market, known as the Single Electricity Market (SEM), has emerged across the borders of the UK (covering Northern Ireland) and the Republic of Ireland. The SEM is a bespoke energy market spanning a UK jurisdiction that has now left the European Union (EU) under the terms of Brexit – a term commonly used to refer to the UK's departure and the agreements underpinning this – and the Republic of Ireland, an EU Member State that remains within the EU (Di Cosmo and Lynch, 2016). The UK's departure

from the EU duly posed significant uncertainties and challenges for the already complicated arrangement of the SEM, and as such it continues to merit careful analytical attention – attention which it has not yet received in a substantial way. This paper analyses and critiques the impact of Brexit on Ireland's all-island energy market so that the complexities underlying the SEM's circumstances, and the Brexit-specific factors acting on them, can be better understood.

We argue, below, that the SEM's common market tends to function as a substantial benefit for energy consumers on the island of Ireland. It represents an integral component of the reconciliation process and, through the provision of stable and equal electricity supply across borders, a common sense of justice. The SEM, although not without its challenges and criticisms, has resulted in lower costs for consumers, increased competition and increased efficiency in electricity consumption. The UK's exit from the EU has provided a threat to this success. Commentary and analysis of current and projected impacts of Brexit on energy governance over time in the UK has been relatively substantial (see, e.g., Pollitt, 2017; Hepburn and Teytelboym, 2017; Lowe, 2018);

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however, the most overtly complex cross-border/transboundary energy problem raised by Brexit has gone largely overlooked, and continues to be so. That is, the impact of Brexit on the SEM that operates across Ireland.¹ This has arisen in spite of the fact that a perceptive study by Lockwood et al. in 2017 flagged the problems that could arise in this type of setting. Here, they noted what they described as a potential trade-off between the economic gains to a post-Brexit UK from being integrated into the EU electricity market on the one hand, and on the other hand, a loss of direct autonomy over rule-making in the electricity sector (Lockwood et al., 2017, p.137). The authors pointed out that some might characterise the latter type of development as amounting to a lack of ‘sovereignty’ (Lockwood et al., 2017, 137).

We therefore put forward the first comprehensive assessment of the implications of the UK’s exit from the EU for the SEM. In doing so, we draw upon the approach of energy justice, an increasingly popularised framework that strives to reveal the justice dimensions of energy systems transformations. More specifically, energy justice recognizes the socio-technical nature of energy systems through its consideration of not only *what* the source of injustice is (distributional justice) but also *who* it affects (justice as recognition) and *how*, or through which processes (procedural justice) (Jenkins et al., 2016). Wider reflections are also made on the extent to which national political borders can limit the attainment of energy justice. Here, we build on scholarly work that argues, in contrast, for the application of universal principles of fairness and equity found in cosmopolitan justice – an energy justice tenant often used in combination with the tripartite approach to signal the need for international or global approaches, arguing that individuals beyond borders “have inviolate worth that must be respected and protected” (Sovacool and Dworkin, 2015, p.440).

Much as the impact of Brexit on the SEM has been neglected, there have, to the authors’ knowledge, been no energy justice explorations of either the SEM arrangement more generally or the transformation it is currently undergoing in light of the Brexit withdrawal at the time of writing. Thus, this paper is the first of its kind and, in a period where electricity market reform or creation will become more common place, it reveals complex dimensions worthy of attention. We draw attention, in particular, to three dynamics. First, the potentially negative distributional and procedural impacts of Brexit on the SEM, including the disruption to its positive impacts for both the South and North. Second, the justice as recognition concern that relevant Northern Irish actors are, by the nature of the Brexit/SEM transformation, constrained from feeding directly into ongoing aspects of the SEM arrangement. Third, through both concerns, the ongoing challenge of energy governance for justice beyond borders.

2. Brexit

The UK officially left the EU on the 31st of January 2020. Brexit, and the procedure of disentangling UK and EU law and governance, has amounted to a long, intricate and complex process (Jacobs, 2018). Indeed, even after the UK’s official exit on 31st January 2020, the UK continued to participate in the EU’s single market and customs union until the 31st of December 2020, under the terms of a post-Brexit transition period that was instituted in the interest of short term UK and EU transitional stability (Swinbank, 2021).

¹ For example, Lynch et al. (2021), p.0 begin a 2021 study on future design options for Ireland’s SEM by noting that the “island of Ireland has high levels of renewable generation by international standards with even higher levels envisaged and so must address these challenges. Market design is informed and constrained by EU policy and progress to date has been mixed.” In spite of these overt governance circumstances and constraints, the study does not go on to directly mention Northern Ireland, nor to address the relevance or impact of an EU-constrained model that operates across an island comprised of an EU and a non-EU region.

Brexit arose as a consequence of a UK Referendum on whether to leave or remain in the EU, which took place on the 23rd of June 2016. The UK public voted to leave the EU by a narrow majority of 52% over 48%. In response to this outcome, the UK Government invoked Article 50 of the Treaty on European Union on 29 March 2017, triggering a withdrawal period where the UK and the EU would negotiate the terms of leaving and adjust their governance arrangements as appropriate, prior to the UK’s departure becoming fully completed (Craig, 2017). The impact of this transition on UK-EU energy governance caused a nuanced range of challenges and uncertainties to arise (Muinzer, 2017a). These challenges and uncertainties evoke broad energy justice concerns that both incorporate and range beyond narrower issues of infrastructure, governance, policy, regulation and financial payment and reward. This includes the broader evocation of transcendent energy justice issues where, for instance, Brexit raises the question of the division of responsibilities across UK energy system governance, including what will be picked up by the market, government and civil society, and the potential for consumer pricing disruptions through various complex and uncertain mechanisms (see Pollitt, 2022). The latter is particularly central as, alongside uncertainties related to the Brexit transition, UK electricity consumers have been hit with rapid price rises attributed to the Russian conflict in Ukraine and the lasting impacts of the COVID-19 pandemic (Goncharuk et al., 2021).

3. The SEM arrangements

The UK has a national, UK Parliament at Westminster, however, it also operates three partially devolved legislatures. These devolved legislatures are located in Northern Ireland, Scotland and Wales, and each produces legislation that is largely identifiable as primary legislation (Burrows, 2000). They are the Northern Ireland Assembly, the Scottish Parliament, and the National Assembly for Wales.² The Northern Ireland Act (1998), as amended, has been the headline legislation governing contemporary devolution in Northern Ireland since its implementation in 1998. Devolution has played a prominent role in Northern Irish governance since Northern Ireland’s creation in 1921, with a devolved system of government operating up to 1972 before being dismantled due to civil conflict (Burrows, 2000, p.10). Northern Ireland enjoys a considerably broader measure of devolved energy competence than the UK’s other substate jurisdictions (Muinzer and Ellis, 2017; Muinzer, 2016). Energy justice research has found that the UK’s devolved constitutional setting creates particular opportunities for the configuration of justice-driven ‘bottom-up’ community energy participation, which might otherwise be subject to substantial constraints if UK devolution was not in operation (Forman, 2017).

Devolution has been suspended and reinstated several times since 1998 in Northern Ireland due to the politically fragile nature of the peace process there (McGrattan and Meehan, 2012). The Northern Ireland Assembly term ending in 2011 had been the first full term to run to completion, but the Democratic Unionist Party’s (DUP) alleged extreme mismanagement of Renewable Heat Incentive subsidies precipitated the devolved government’s collapse again in early 2017 (Muinzer, 2017b). The devolved government was restored in early 2020 under an agreement called *New Decade, New Approach*, and is since in collapse again at the time of writing due to tensions concerning post-Brexit trade checks at Northern Irish ports and an associated ‘border’ that some perceive the UK-EU Brexit arrangements to have drawn down the Irish Sea between Northern Ireland and the rest of the UK: on these complex arrangements in the context of justice and sovereignty, see Murphy (2021). It was during a period of Direct Rule after a

² Northern Ireland Act (1998), s.5(1); Scotland Act (1998), s.28(1); Government of Wales Act (1998), s.107(1). The National Assembly for Wales originally produced ‘Measures’, but now produces Acts comparable to the Northern Irish and Scottish legislatures.

collapse of the devolved institutions, while Peter Hain was acting Secretary of State for Northern Ireland,³ that the Hain administration cultivated a crucial energy partnership with the Republic of Ireland and both jurisdictions launched the SEM (commencing November 2007). [Arci et al. \(2018\)](#), (p.4061) have captured the innovative character of these arrangements: “By combining what were two separate jurisdictional electricity markets, the SEM became one of the first of its kind in Europe when it went live on 1st November 2007.” They add that the SEM’s intention is “to provide for the least cost source of electricity generation to meet customer demand at any one time across the island, while also maximising long-term sustainability and reliability.” (Arci et al., 2018, p.4061–4062). Thus, such developments augment the realisation of energy justice in relation to aspects of cost, sustainability and reliability.

A bilateral North/South legal framework provides for the SEM arrangements in Ireland,⁴ supported by a *Memorandum of Understanding* between [UK Government and the Government of Ireland \(2006\)](#). The SEM created a single all-island electricity market by drawing together the Northern and Southern electricity markets, with most electricity on the island to be bought and sold through a gross mandatory pool. Given these circumstances, a crucial point we would stress in the express context of Brexit, is that the SEM is a *domestic initiative* rather than an EU initiative, in spite of the UK and Republic of Ireland both being EU members at the time of its creation. Several years prior to the completion of Brexit, [Higgins and Costello \(2016\)](#), p.2 highlighted this issue by reasoning that “The SEM is... not the result of laws transposed directly from any EU-level directive. Thus the SEM as a standalone product of UK-Irish bilateral co-operation would remain unaltered in its legal constitution by the UK’s departure [from the EU].”

The SEM’s “key design features” have been summarized as follows:

- the pool arrangements where all generators receive and all supplier units pay the same single system marginal price (SMP);
- a system of collection and distribution of payments for capacity based on fixed amounts determined annually; and
- the rules of the market are set out in the SEM Trading and Settlement Code.

([McQuade, 2017](#), p.117)

[Cosmo and Valeri \(2018\)](#), (p.647) have also provided a useful summary of the SEM, as follows:

The SEM encompasses the electricity grids of both Ireland and Northern Ireland, making it a cross-jurisdiction, cross-currency system. It is a compulsory pool system with capacity payments, where plants bid their short-run marginal costs and plants that provide lower bids are called to generate before more expensive plants, accounting for each plant’s technical constraints. The SEM is a gross mandatory pool with an associated single System Marginal Price (SMP) in each period. ...In addition to the SMP, plants receive capacity payments. The payments are based on a capacity payment pot determined every year by the regulators[.]

³ Peter Hain was Secretary of State for Northern Ireland from 2005 to 2007, under the Tony Blair government.

⁴ The Northern Irish legislation that allows for the SEM is the [Electricity \(2007b\)](#). The equivalent legislation enabling the SEM in the Republic of Ireland is the [Electricity \(2007a\)](#).

A Single Electricity Market Operator (SEMO) oversees the market, and this is regulated by the SEM Committee, a joint committee comprised of Northern and Southern regulators. Since the restoration of devolution following Direct Rule under the Hain administration, the SEM has been operated jointly by Northern Ireland’s devolved administration and the Republic of Ireland. (Though, as noted above, the devolved government has also been subject to temporary periods of collapse since that time, with one extended collapse arising due to the Renewable Heat Incentive Scandal, see further: [McBride, 2019](#)).

Generally speaking, the SEM has been a significant success. It has been noted that the “benefits of an all-island market” of this nature “include promoting competition, improving security of supply, reducing energy costs and making efficiency benefits available to all consumers”([McQuade, 2017](#), p.45). This, we argue, carries significant justice benefits, particularly in light of a complex history of conflict and through the SEM’s role in fostering reconciliation. Another notable feature where energy justice benefits accrue concerns the manner in which the SEM facilitates and simplifies trade in two different currencies (Northern Ireland’s Pound Sterling and the Republic of Ireland’s Euro). One member of Ireland’s SEM Committee, writing in an independent scholarly capacity, has highlighted that technical issues arising in the context of the SEM may also provide useful lessons for the broader EU, notably where challenges around integrating the EU electricity market with growing intermittent renewables arise ([Newbery, 2017](#), p.602–605).

It is the case, then, that aspects of justice issues engaged by Ireland’s innovative energy economy must be viewed through a transboundary ‘all-island’ lens. Whether the repercussions of Brexit over the long term might serve ultimately to distort this lens, fracture it, or leave it entirely in tact is an important yet neglected question.

4. The Integrated Single Electricity Market and the EU

Given that the UK, prior to Brexit, was a longstanding EU Member State, and the Republic of Ireland remains one currently,⁵ it is unsurprising that the SEM has been influenced by its EU governance context. At present, it has been subject to an ongoing EU objective to incorporate Ireland’s all-island market into the EU’s Target Model (on the Target Model, see further [ACER \(2011\)](#)). The Target Model arose from the EU’s Third Energy Package, which is designed to develop a single EU gas and electricity market, with the Target Model focusing on achieving electricity market integration. In Ireland, the process of integration between the all-island market and the European Target Model is known as the Integrated Single Electricity Market (or I-SEM) project ([SEM Committee, 2014](#); [EirGrid, SEMO and SONI, 2017](#)). Northern Ireland, however, has since left the EU through the Brexit process, and its position in the recently constituted I-SEM, in our view, causes significant complications.

The Lisbon Treaty (in force as of the 1st of December 2009) introduced changes to EU constitutional law that designated energy an area of “[s]hared competence between the Union and the Member States” for the first time, whereas previously energy had been a competence internally retained by the individual Member States ([Treaty on the Functioning of the European Union](#), art.4(2)(i) (“energy”). In order to exit the EU, UK Parliament was required to repeal the European Communities Act 1972, because that Act gave effect to EU law in the UK. Due to the enormity of EU law and the complexity of absorbing it swiftly, the UK’s primary governance strategy for exiting the EU was to “grandfather existing regulatory regimes, retaining EU legislation which could then be amended or repealed as appropriate at a later date” ([Pincott et al. 2016](#), p.2). Thus, the general immediate trend as a result of Brexit has been that EU energy law has been absorbed into the UK’s legal order ([DEEU, 2017](#)), and since the European Communities Act 1972 has been

⁵ The UK and Ireland joined the EU in 1973.

repealed and the UK's exit process has been completed, constitutional control over energy competence has fallen to the UK once more.⁶ In the case of the UK, then, in principle this has caused the primary site of UK-specific energy justice issues engaging distribution, recognition and procedures matters (McCauley, 2018, p.17) to shift from a previously shared EU-UK setting to becoming more discretely nested within the UK setting in the post-Brexit period.

Any detailed analysis of Brexit's ongoing and projected impact in the area of energy governance will be a complex affair, especially if the analysis engages with legal aspects of the arrangements (Muinzer, 2017a). Participation in the EU's Internal Energy Market itself is legally onerous, with the Northern Ireland Affairs Committee noting that it "requires ongoing alignment with the EU rules and regulations which govern it, including the Industrial Emissions Directive, restrictions on state aid, and the EU Emissions Trading Scheme" (NIAC, 2017, para [66]). An IIEA policy brief (Higgins and Costello, 2016, p.3) has also highlighted that complex issues are potentially raised around citizens' data rights and protections in the context of SEM cross-border energy data exchange (General Data Protection Regulation (EU) 2016/679). This, although not commonly considered as such, represents a potentially new dimension of procedural and recognition justice pertaining to who has access to information, with what consent and to what ends. Moreover, the Brexit withdrawal and resultant changes to the SEM have the potential to impact both the distribution of electricity and the affordability of it. There is a risk, for instance, that any energy import tariffs imposed on the UK could be transferred to the Irish market, with knock on implications for competitiveness and prices (Purdue and Huang, 2015).

We suggest that a degree of contrary momentum is discernible in EU-UK I-SEM development as a point of general principle. It is clear that the momentum instituted under the European Target Model threatens to continue pulling the Republic of Ireland in one direction (towards greater EU integration), while Brexit has served to pull Northern Ireland in a different direction (out of the EU), tugging the SEM in opposite directions. Moreover, although EU dimensions of the SEM regime have in effect been grandfathered into Northern Irish law, in our view substantial latent dissonance persists in relation to governance of the SEM on the island of Ireland, where one recognises certain consequences arising from UK-EU post-Brexit circumstances. In particular: the Republic of Ireland is subject to conventional EU oversight from the European Commission by virtue of its EU membership, including in the area of energy, whereas Commission intervention in Northern Ireland is constrained by the UK's exit from the EU; the Republic of Ireland is subject to the fulsome jurisdiction of the Court of Justice of the European Union (CJEU), whereas Northern Ireland is not⁷; citizens in the Republic of Ireland have the capacity to influence and shape EU rules on energy market alignment across the island through their elected EU representatives, whereas Northern Irish citizens do not due to their position outside of the EU. This latter issue in particular means that a significant democratic deficit exists in Northern Ireland in the sphere of energy governance. Indeed, given the justice as recognition principle that all individuals must be fairly represented, that they must be free from physical threats and that they must be offered complete and equal political rights (Schlosberg, 2003), this raises clear contraventions. Procedurally, it is also clear that this does not amount to equitable procedures that engage all stakeholders in a non-discriminatory way (Walker, 2009; Bullard, 2005). Thus, procedural and recognition perspectives in particular in the context of energy justice considerations highlight that aspects of these arrangements are far from ideal.

⁶ Of course, the UK is still free to enter into energy-specific agreements with the EU and other states, which can involve offering up some agreed aspects of energy control.

⁷ Although Northern Ireland is subject to the EU's partial jurisdiction; see further below.

Prior to Brexit's completion, in addressing solutions that might mitigate future negative potential impacts of Brexit in the sphere of I-SEM governance, Wright et al. (2017) pointed out that it is possible for the UK to continue to accept the direct application of EU energy law in Northern Ireland, rendering the jurisdiction a distinct zone within the UK that could thus be in regulatory harmony with the south of Ireland. Here, "one part of the [UK] would be subject to EU legislation, while the rest would not" (Wright et al., 2017, section [5]). A fulsome retention of EU energy law was not ultimately employed, but a partial one was (discussed further below). There are a range of problems with this type of approach in principle, however. For example, it generates some degree of regulatory barrier, where Northern Ireland and Scotland seek to utilise or develop aspects of their interconnectivity, given that Scotland is beyond the purview of the EU framework (the Moyle Interconnector links the Northern Irish and Scottish electricity transmission grids, see further: Mutual Energy (2021)). Quite apart from these sorts of distributional energy justice concerns, and as indicated above, where Brexit positions the citizens of Northern Ireland *outside* of the EU, a recognition justice perspective highlights that it is undemocratic to make the jurisdiction subject to EU legislation in this way. Indeed, democratic norms dictate that citizens should have direct input into the laws that govern important aspects of their lives, a principle that further underscores a recognition justice perspective in this setting.

It was also posited prior to the Brexit transition that the UK might opt into the European Economic Area (EEA) model (FIT Consulting, 2017), where participating states comply with the EU's Third Energy Package and associated law, meaning that the I-SEM could remain harmonious on both sides of the Irish border through this channel. This was surely unrealistic, however: EEA members must subscribe to the EU's 'four freedoms' (see further Barnard, 2016), and UK Government had set its face against this sort of policy over the course of Brexit, notably the EU's conception of 'free movement of persons' (HLEUC, 2017).

Ultimately, in principle, Brexit has meant that even though one overall electricity market is at issue, the Republic of Ireland as an EU Member State has been compelled to align with the EU Target Model and associated EU requirements, whereas Northern Ireland, as part of a post-Brexit UK, has been free, in principle, not to. In reality, in a partial subversion of procedural and recognition energy justice norms, Northern Ireland has been compelled towards alignment by the EU and by the UK and Republic of Ireland Governments, in order to keep the market functioning. In spite of the considerable problems arising from these circumstances, including the creation of a substantial democratic deficit for Northern Ireland – a jurisdiction where broad energy controls are supposed to be devolved to the Northern Irish Executive and Parliament (Muinzer, 2020) – it seems clear that the current market could not continue under substantially divided circumstances, and retention of a healthily functioning and coherent SEM is in both Northern Ireland's and the Republic's interests at present. In practice, then, a strong degree of harmonized common rules are required to permit the SEM to continue running, which have been achievable through diplomacy, Brexit notwithstanding.

5. Broader geographies

Newbery has characterised the SEM "of the island of Ireland [as one that] faces higher intermittency with a lumpier and more isolated system than almost any other country" in Europe (Newbery, 2017, p.598). As a consequence of the SEM, Northern Ireland and the Republic of Ireland's energy governance is functionally interlinked. A cross-border 'North-South Interconnector' has been developed between Tandragee and Louth, supported by two 'standby' Interconnectors, and planning approval has been received for the construction of a further major interconnector between Tyrone and Cavan (Black, 2020) (although it is currently subject to some delay at the time of writing (O'Sullivan, 2021)). However, although the SEM itself is a market rooted in the North and South of Ireland, physical interconnection delineates the geographic

range that it interacts with substantially more widely. In particular: Northern Ireland is connected to Great Britain's national grid via the 'Moyle Interconnector', which has linking points at Ballycronan More in Northern Ireland and South Ayrshire, Scotland; a further interconnector links Dublin to Wales, commonly known as the 'East-West Interconnector'; in January 2013, the Republic of Ireland and Great Britain advanced their ties by signing a major *Memorandum of Understanding* designed to facilitate the export of renewable energy from the Republic of Ireland to the British mainland (Doyle, 2013); etc. (see further the discussion of the Greenlink interconnector and associated issues in Dutton and Lockwood, 2017). This, in effect, demonstrates that infrastructure and therefore governance and energy justice concerns, very much span borders.

This capacity to exchange energy that has been developed by the two increasingly interconnected islands of Great Britain and Ireland opens up interesting opportunities within the sphere of transboundary energy governance and cosmopolitan justice thinking. On the island of Ireland itself, the interconnected all-island SEM affords the North and South administrations greater opportunities for joined up thinking and coherent energy market practice and investment. It also bolsters them with island-wide infrastructural development. Such circumstances are in the tradition of energy justice scholarship that highlights how opportunities to overcome artificially imposed borders can enable a greater expansion of energy justice into the realm of cosmopolitan justice. Here, international approaches that move beyond national borders can help to work for the "inviolable worth" of individuals generally, so that people can be better "respected and protected" without artificial statist borders imposing substantial energy impediments to their typical extent (Sovacool and Dworkin, 2015, p.440). Thus, Ireland's all-island approach to energy also creates opportunities for both jurisdictions to work in concert in the sphere of energy decarbonisation, providing stronger cumulative opportunities to drive down greenhouse gas emissions across the island as a whole (Torney, 2018). The generation and distribution of renewable energy, for instance, can be targeted not just parochially (CDWGGGENI, 2011, p.51); this all-island approach has been broadly integrated into island-wide decarbonisation strategies for over a decade (DRD and ECLG, 2010, p.21 ("Climate Change")).

There have been proposals to develop a Celtic Interconnector between the Republic of Ireland and France, in part because Ireland is not connected to other EU Member States, such that its geographical positioning leaves it heavily reliant on the UK for meaningful energy interconnection (this also includes receiving the vast majority of its gas via the UK⁸). Prior to the completion of Brexit, Lynch (2017, p.4) observed that "All of Ireland's interconnection is currently to Great Britain and so post-Brexit, Ireland's interconnection to another EU Member State will be zero". She also argued that while the post-Brexit development of the Celtic interconnector may seem to be something of a necessity, "[i]n spite of this, a new interconnector to France should only proceed if it enhances welfare in Ireland and France, as Irish and French consumers will ultimately pay for the investment" (Lynch, 2017, p.4). In the authors' view, given that the EU, including Ireland, is working towards the increased integration of its energy markets and systems, it does not appear to be strategically sound for a Republic of Ireland that seeks to drive its contribution to this process directly within the broader EU to do so by relying on the UK to function as a physical gatekeeper between it and the rest of the Union. This means that the case for a Celtic Interconnector seems strong.

A further challenge posed to energy systems by Brexit in the context of these interconnected energy islands pertains to the uncertainty it has caused. The *Ireland 2050* group has emphasised that "Uncertainty is the greatest business risk" (Ireland 2050, 2021). Making reference to oil and gas markets in addition to electricity markets, which all share a

pronounced degree of interaction and connection in the UK-Ireland context, Ireland 2050 (2021) added during the Brexit period that:

The concern with Brexit is that if the UK is no longer prepared to be subject to EU trading rules, what will take its place? This is the key uncertainty for investors and the most likely outcome is delayed investment. Depending on economic performance prices could go up or down reflecting surplus or scarcity.

In other words, the presence of energy policy uncertainty is itself a powerful undermining force in the context of business and investment in this interconnected island setting, with real-term, knock-on energy justice implications for consumer affordability.

Undoubtedly, it was not a foregone conclusion that long-term post-Brexit SEM outcomes would automatically retain a form permitting the market to harmonise on both sides of the Irish border, not least given that the UK could endeavour to outcompete the Republic of Ireland's energy sector rather than co-operate and blend with it. For example, one major EU-level driver acting on all EU Member States, and thus including both Ireland and the UK during the UK's EU membership, is the EU Emissions Trading Scheme (ETS) (Directive, 2009/29/EC (ETS Directive)). The EU ETS puts a price on carbon, and it was possible that the UK as a whole would remain a participant in this scheme after Brexit, not least given the UK's need to decarbonise under its national *Climate Change Act, 2008* (Lockwood, 2013; Muinzer, 2018). However, the UK decided to leave the EU ETS, and a new scheme was opened for the UK on 19 May 2021 (Newsroom, 2021).⁹ Exiting the scheme puts the UK in a position to apply a carbon price well below current EU levels that can undercut its EU neighbours, which would be likely to negatively impact the Irish carbon market significantly. The UK is also beyond the direct purview of EU State Aid regulations, and so in principle it can inject targeted state aid in a less constrained way, again undercutting Ireland's market.¹⁰ So far as the authors are aware, to date the UK has adopted an approach that is roughly balanced with the Irish/EU approach, and so substantial market distortion has not arisen.¹¹ The potential, however, is there, and the implications large.

Conversely, a post-Brexit UK could become subject to very pronounced energy tariffs. These could conceivably arise where energy passes between both islands, and the arrangement might be to the immediate detriment of the UK (see Higgins and Costello (2016), p.6 on the East-West Interconnector). This type of outcome is unlikely in current circumstances, however. In addition to being in the spirit of poor neighbourliness, a state like Switzerland is interconnected strongly with EU energy markets and is not subject to such tariff attacks. As such, the Republic of Ireland and the UK will likely seek to continue operating in a conventional, collaborative spirit in going forward, thus preventing distributional justice from becoming heavily imbalanced in favour of one state over another in this regard.

6. The Post-Brexit SEM

As a result of UK Government and EU arrangements set in place after Brexit, Article 9 of the *UK and EU (2020) Protocol on Ireland/Northern Ireland* now applies in Northern Ireland at the time of writing. Article 9 states as follows:

Single electricity market The provisions of Union law governing wholesale electricity markets listed in Annex 4 to this Protocol shall apply, under the conditions set out in that Annex, to and in the

⁹ The UK ETS is under review at the time of writing, with a possibility that the UK scheme will be reconnected with the EU scheme.

¹⁰ As a World Trade Organisation member, the UK continues to be subject to the terms of the WTO Agreement on Subsidies and Countervailing Measures regardless of EU membership.

¹¹ Note that elements of the ETS also continue to apply in Northern Ireland (see below).

⁸ The Corrib natural gas field is alleviating some dependence, but its lifespan is anticipated to be limited to 10–15 years.

United Kingdom in respect of Northern Ireland. (UK and EU, 2020, Article 9.¹²)

By virtue of Article 9, then, several items of EU legislation also currently apply as a consequence, found in Annex 4 to the *Protocol* (UK and EU, 2020). Annex 4 lists four EU Directives¹³ and three EU Regulations¹⁴ that “continue to apply to and in the United Kingdom in respect of Northern Ireland” in relation to the “generation, transmission, distribution and supply of electricity, trading in wholesale electricity or cross-border exchanges in electricity” (UK and EU, 2020, Annex 4). The UK and EU also concluded a Trade and Cooperation Agreement on 24 December 2020, which came into force provisionally from 1 January 2021 (*Official Journal of the European Union*, 2019). This agreement has assisted in supporting a framework for UK-EU energy cooperation, and recognises Great Britain’s new status as a third-country party that has now left the EU. The Agreement “lessens withdrawal symptoms for those operating in the electricity sector by providing some assurances on interconnector operations” and includes the creation of “Trade Specialised Committees including a Specialised Committee on Energy” (McCann FitzGerald, 2021).

Taken generally, the Protocol builds in a substantial role for the CJEU – a body with substantial procedural justice provisions – which the *Institute of Government* (2021), p.7 summarises as follows:

The application of EU law in NI is subject to EU oversight. The [European] commission can take action against the UK government for non-compliance, as if it were a member state, including taking it to the European Court of Justice.

This has been deemed problematic by UK Government. The *Institute of Government* (2017), p.7 has summarised UK concerns in the following terms:

The dispute settlement process should be based on normal treaty arrangements, with governance and disputes managed jointly between the UK and EU and disagreements ultimately resolved through international arbitration.

The approach advocated here is more conventional on procedural justice grounds. It is unusual for the European Commission to have a facility to take a non-EU Member State Government to court in this way, not least where the non-implementation of EU laws concerns an area of governance (energy) controlled not by UK national government, but by Northern Ireland through devolution. It is notable that Northern Ireland cannot participate directly in shaping or legislating for those EU laws; a similar context to that raised earlier in our discussion, whereby the input of particular actors is unequally constrained. Thus, deficiencies in recognition justice as well as in procedural justice are clearly engaged from an energy justice standpoint. The more conventional type of approach noted above echoes EU-Switzerland arrangements in major respects, where in instances of dispute, an arbitration panel makes the final decision, albeit that the panel can refer questions on EU law to the CJEU for an opinion (*Institute of Government*, 2017, p.8).

It is submitted that a scenario resulting from Brexit where the SEM would be discontinued is unlikely. In addition to reducing the intrinsic energy justice benefits arising from the SEM identified earlier in relation to reduced energy costs, greater security of supply, etc., discontinuation would create conditions where Northern Ireland (/the UK) might fall back on endeavouring to out-compete the Republic of Ireland’s energy economy. The Northern and Southern Irish electricity sectors are so interconnected and interdependent that many Northern Irish/UK

interests, in effect, overlap with those of the Republic’s. The SEM endeavours to manifest a mixed economy paradigm with a free-market emphasis that is favoured in this sector on both sides of the Irish border, combining the approach across an all-island market intended to be of mutual benefit to *both* jurisdictions (SEM Committee, 2018, p.10). In addition to these particular cosmopolitan justice trends that are nested within an energy justice conception that transcends the North and South state borders, it is notable that the SEM has also made a significant island-wide contribution to the important strategic process of energy decarbonisation required under climate law,¹⁵ notably in relation to wind energy deployment (Cosmo and Valeri, 2018). All, as we note, carry significant positive impacts for both the South and North.

Evidence shows that key Republic of Ireland and Northern Ireland actors have been largely agreed on the importance of the SEM’s post-Brexit preservation for some time, and UK Government and the European Commission have also supported the arrangement. This overarching spirit of agreement was captured in 2018 in the *HLEUC* (2018)’s *Brexit: Energy Security* report. Here it is noted that:

The Utility Regulator of Northern Ireland (UREGNI) told us: “If SEM cannot operate as a functional market post Brexit then this could have a range of repercussive social and economic aspects—including security of supply concerns and the potential for higher prices with consequential impacts on fuel poverty and manufacturing costs in NI.” National Grid explained that a disruption to the I-SEM “could result in an expensive duplication of infrastructure and governance for both the EU and UK”. (*HLEUC*, 2018, p.39)

In a position paper on Ireland, the *UK Government* (2017), p.23 had signalled its support for the continuation of the SEM in 2017. Support had also been explicitly emphasized in broader public discourse in the Brexit period by UK Government, as emphasized here by Robin Walker, Parliamentary Under Secretary of State in the Department for Exiting the European Union:

We know there are challenges, of course. The single electricity market is an entirely unique arrangement, although the EU has been working towards closer integration across Europe. These challenges notwithstanding, we believe it is in everybody’s interest to come to a solution which facilitates the continuation of the single electricity market. *Staunton* (2018)

The European Commission also signalled its support, and the *HLEUC* (2018), p.41 emphasised that:

The [I-SEM] will benefit both Northern Ireland and the Republic of Ireland in terms of energy security, decarbonisation and energy prices. We are encouraged that both the Government and the European Commission recognise its value and are seeking to preserve it.

A report from the *NIAC* (2017), p.73 also underscored the stakeholder support for the continuation of the SEM in the context of I-SEM developments, and stressed an associated desire for market certainty:

There is a clear desire from electricity market stakeholders in Northern Ireland to retain the existing electricity market arrangements on the island of Ireland. Mutual Energy told us, “anyone in the energy industry—I think this goes for the regulator and the system operators and everything—have said that the [internal] energy market across Europe is a good thing. We would want it to continue.” Indeed, the Utility Regulator, which is leading in the design of the I-SEM, told us, “there is a real opportunity to make the case that the I-SEM should continue [...] we have to make sure that everything possible is done to protect it”. SONI said it believed the current market arrangements were appropriate and had brought benefits to

¹² Article 11 also pertains to “areas of North/South cooperation”.

¹³ *Directive* (2010), 75/EU, *Directive* (2009a), 72/EC, *Directive* (2005), 89/EC, *Directive* (2003), 87/EC.

¹⁴ *Regulation* (EU) (2011), No 1227, *Regulation* (EC) (2009a), No 714, *Regulation* (EC) (2009b), No 713.

¹⁵ *Climate Action and Low Carbon Development Act* (2015) (Republic of Ireland); *Climate Change Act* (2008) (UK).

customers in Northern Ireland, and that Brexit should not lead to a decision to change that model.

Given the mutual UK-Irish-EU interests at issue here, acting in concert with a transboundary desire for market certainty and a spirit of general support for the continuation of the all-island arrangements, it would have been a collective indictment of diplomacy if key decision makers could not have come to meaningful agreement on some form of SEM continuation (SEM Committee, 2021).

It is also well known that ‘The Troubles’ and associated unrest and violence radically destabilised Ireland prior to the Northern Irish post-conflict peace transition (McKittrick and McVea, 2002). It is notable, therefore, that the all-island energy market stands as one of the most striking examples – perhaps the most striking example – of an encouraging degree of post-conflict harmony that has been achieved across the island in a particular sector. It is thus profoundly imbued with its own novel energy justice character, insofar as the SEM itself embodies a partial manifestation of cross-border conflict resolution in its own right. SONI has stated that:

The SEM was launched post-Belfast Agreement in the spirit of cross border cooperation; it was well received in both political spheres and by industry. The development of the wholesale market was underpinned by legislation and was achieved through collaboration between two governments, two departments, two regulators and two system operators; and is an exemplary outcome of the peace-process. (HLEUC, 2018, p.38 (emphasis added))

This, we would add, is an example of cosmopolitan governance for justice across borders, that it would be remiss to ignore and remiss to destabilise. Here, Centrica has also stated in the context of the SEM, that “Energy has been an important example of the ‘peace dividend’ in Ireland” (HLEUC, 2018, p.38). Recognition of the energy market’s positive interplay with this broader socio-political legacy can be viewed as another primary driver that serves to simultaneously justify and galvanise efforts to preserve the SEM. In sum, given that the SEM is widely held to be beneficial to both sides of the Irish border, there is a strong perception and understanding that it is in both jurisdictions’ interests to preserve and continue its operation in the current period. The analysis above has illustrated what is at stake if it is not.

7. Conclusion and policy implications

It has been identified above that the I-SEM is aligned at the time of writing with a substantial range of EU Directives and Regulations, including in Northern Ireland. It is also clear that the application of EU law in Northern Ireland remains subject to EU oversight, and that action can be taken against Northern Ireland at the CJEU via bringing a case against the UK. To the authors’ knowledge, issues concerning the oversight role of the European Commission and the CJEU have not been linked in direct, critical, evaluative terms to the I-SEM itself on an all-island basis, including in the Institute for Government (2021) summary document quoted earlier, which runs through post-Brexit related issues thoroughly. The present study, however, clarifies that the CJEU is given a substantial oversight role in the context of the I-SEM.

The Institute of Government (2021), p.8 has noted, with reference to the over 300 EU Directives and Regulations that continue to apply at the time of writing in Northern Ireland, as follows: “[a]s NI is no longer part of a member state, there are no formal opportunities for it to influence the EU policy making processes and therefore the rules that will apply to it.” In linking these problems to the neglected issue of the SEM, then, an energy justice perspective throws into relief the problematic circumstances underlying these arrangements in the express context of energy from both the context of procedural justice and justice as recognition. Here, Northern Ireland’s democratic institutions and directly elected actors are placed at a substantial remove from key governance levers within their own energy regime. The authors recommend on grounds of

equitable justice that the role of the Northern Irish institutions should be reviewed by the EU and UK Government, with a view to providing Northern Irish representatives with a meaningful degree of formalised and entrenched input into decision-making.

It has been noted above that energy competence falls within Northern Ireland’s devolved competences under the UK’s constitutional arrangements (albeit that research also shows devolved energy competence is “cut into” and “hollowed out” in complex ways by other multi-level competences (Muinzer (2020)). In 2017, Lockwood et al. (2017), p.137 suggested prior to the completion of Brexit that:

The basic issue in electricity Brexit [*sic.*] is that if the UK wants to enjoy the economic benefits of remaining part of what is an increasingly integrated European electricity market then, as European legislation is currently drafted, it will not only have to forgo an element of autonomy through accepting legislation and regulations made collectively at the EU level, but it will also lose much of its voice in that decision making process, effectively becoming a rule-taker rather than a rule-maker.

The I-SEM arrangements that have been locked in for Northern Ireland in the post-Brexit period amount to an ultimate manifestation of this type of tension in the sphere of energy policy. The arrangements are predicated on substantial and continuing EU interconnection on one hand, and on the other hand, the removal of decision and rule-making input in an area that purports to be substantially devolved to Northern Ireland’s directly elected representatives and governance institutions. Again, on grounds of equitable justice, the authors recommend that the capacity for the Northern Irish institutions to exercise the jurisdiction’s democratically devolved energy competence should be reviewed by the EU and UK Government, with a view to constructing solutions that will close the extant democratic deficit gap substantially.

In looking to the future, Irish law firm Mason, Hayes & Curran have summarised that:

[t]he Protocol will remain in place for an initial period of four years after the end of the transition period. The continued application of Articles 5–10 of the Protocol, which includes Article 9 on SEM, requires the consent of Northern Ireland thereafter. If approved in Northern Ireland at that stage, the articles will apply for a further four years, or eight years if there is cross-community support. If Northern Ireland rejects the continued application of articles of the Protocol, they will remain applicable for a further two-year transition period.

(Mason Hayes and Curran, 2021)

Thus, an overt if highly partial counterbalance to the democratic deficit issues flagged above lies in the future of these components of the Protocol, which are subject to some degree of direct review and reapproval/rejection by Northern Ireland in times to come. This is helpful, but it does not go far enough; as recommended above, more granular and nearer-term solutions are required in order to truly render the underlying arrangements just.

Taken cumulatively, these insights generate suggestions regarding ways in which the problems sketched out in this paper might have been mitigated in advance of the major legislative and regulatory disruption embodied by Brexit. In other words, when the SEM was being constructed, things might have been done differently to some extent in order to minimise the current difficulties arising after its construction. This slightly differing approach to SEM design would include building into the SEM arrangements entrenched and sustained requirements for the Northern Irish institutions to have formalised, ongoing input into any major negotiations and resultant outcomes that would be reasonably likely to significantly impact the jurisdiction’s energy systems and governance regime. It should be borne in mind in relation to this point that, as noted above, energy competence is devolved to Northern Ireland, and such entrenched input is in some sense an entitlement,

given that its elected representatives are partially elected on the basis of their energy competence and energy manifestos. Similarly, an entrenched entitlement on the part of the Northern Irish institutions to formalised, ongoing and direct input into both law-making concerning its energy system, and into dispute resolution (e.g., between Northern Ireland and the Republic of Ireland), would appear to be essential, and should thus have been entrenched as a norm at the point of the SEM's conception. Other countries or jurisdictions in similar positions can learn from these lessons.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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