Clock changes: is it time for change?
The European Union Committee

The European Union Committee is appointed each session “to scrutinise documents deposited in the House by a Minister, and other matters related to the European Union”.

In practice this means that the Select Committee, along with its Sub-Committees, scrutinises the UK Government’s policies and actions in respect to the EU; considers and seeks to influence the development of policies and draft laws proposed by the EU institutions; and more generally represents the House of Lords in its dealings with the EU institutions and other Member States.

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- Home Affairs Sub-Committee
- Internal Market Sub-Committee
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Evidence is published online at [https://www.parliament.uk/eu-internal-market-subcommittee/discontinuing-seasonal-changes-time](https://www.parliament.uk/eu-internal-market-subcommittee/discontinuing-seasonal-changes-time) and available for inspection at the Parliamentary Archives (020 7219 3074).

Q in footnotes refers to a question in oral evidence.
SUMMARY

“Spring forward, fall back” is a pithy reminder about how seasonal changes of time operate, but the basis for retaining those clock changes or abolishing them, as the European Commission proposes, is not so clear.

Public movements in favour of abolishing clock changes are evident in several EU Member States, often citing clock changes’ negative consequences for public health and road traffic accident rates. However, research in this area is surprisingly sparse and inconclusive. Moreover, the abolition of clock changes and adoption of a permanent time zone—either permanent winter-time or summer-time—would have significant consequences for a number of industries, such as aviation and agriculture, as well as the daily lives of citizens, including, in the UK, those living in Scotland and northern England.

The case for and against abolishing clock changes is especially complex for those living in Northern Ireland. The depth of economic and social integration in the border region of Ireland/Northern Ireland is extensive, whereas the majority of Northern Ireland trade (by value) is with Great Britain. While the EU’s proposal is not progressing quickly, a decision at EU level to abolish clock changes will force Northern Ireland to introduce a time border for part of the year, either with Ireland (by retaining clock changes along with the rest of the UK), or with Great Britain (by following the EU in abolishing the changes). The Government opposed the Commission’s proposal to abolish clock changes following its introduction in September 2018 and has clearly indicated that it has no plans to implement such a policy. It has not, however, assessed the implications for the UK of not aligning with this proposal. Nor has it consulted the public or stakeholders—unlike, for example, the Irish government.

Given the importance of the potential impacts on Northern Ireland and on industries across the UK, we urge the Government to do more now to ensure they have the full picture about the consequences of both keeping and abolishing our own clock changes so that the UK can act on evidence-based research when the EU makes its decision about how to manage clock changes in the future.
CHAPTER 1: INTRODUCTION

1. Member States of the European Union (EU) have exclusive competence for determining the standard time(s), or time zone(s), applying on their territory.¹ They are, however, required by EU legislation to shift their time forward by one hour on the last Sunday of March and back again on the last Sunday of October, a practice referred to as seasonal changes of time or, more commonly, as clock changes.

2. Seasonal changes of time predate the EU and its predecessor organisations. First proposed in the UK in 1907 to allow for more leisure time in the summer, they were adopted by several European countries during the First and Second World Wars as an energy-saving measure. Most countries abandoned the system at the end of the Second World War, except for the UK.

3. During the 1960s and 1970s, seasonal changes of time were re-introduced in several Member States of the European Economic Community (EEC). The start and end dates of summer-time differed, however, across countries. To avoid adverse impacts on the functioning of the Single Market, a series of European Directives were adopted, progressively harmonising seasonal changes of time across Member States. This involved three main stages:

   - In 1980, a common date was introduced for the start of summer-time;
   - In 1982, it was agreed that summer-time should end either on the last Sunday of September or the last Sunday of October—the latter date was observed in the UK and Ireland; and
   - Since 1996, all Member States have been required to end summer-time on the last Sunday of October.

4. At present, seasonal changes of time are governed by Directive 2000/84/EC, also known as the 9th Summertime Directive.² Unlike predecessor legislation, it provides for the arrangements for seasonal changes of time to apply indefinitely and, in the Commission’s view, makes them compulsory.³

   The debate on seasonal changes of time

5. Seasonal changes of time are the subject of strong opposition in some EU Member States. For example, in Finland in 2017, both a citizens’ initiative and the Finnish parliament’s transport and communications committee asked for them to be abandoned, citing evidence of their negative effects on work

   ¹ There are currently three standard times in the EU: Western European Time or Greenwich Mean Time (GMT), Central European Time (GMT+1), and Eastern European Time (GMT+2).
performance and sleeping patterns. The Finnish government subsequently wrote to the Commission with the same request. Pieter Cleppe, Head of Brussels Office, Open Europe, told us that clock changes were also “seen as a great concern” in Germany, and the Government’s submission to our inquiry named Poland among the opponents of the clock change system.

6. In February 2018, the European Parliament (EP) passed a resolution calling on the Commission to conduct a “thorough assessment” of the 9th Summertime Directive in the light of the citizens’ initiatives. That resolution referenced an October 2017 review by the European Parliamentary Research Service of the literature on summer-time arrangements, which pointed to evidence of clock changes adversely affecting human health. That review referred in particular to health research summarised in a report by the Office of Technology Assessment at the German Bundestag, which highlighted negative effects on concentration and cognition in the days after a time change, and possibly more long-lasting effects on sleep patterns, hormone release, and the body’s metabolism. The Office of Technology Assessment’s report concluded, however, that further research was required on the “short-term and long-term [health] implications related to the time change”.

7. The Commission held a public consultation on the possibility of abolishing seasonal changes of time between 4 July and 16 August 2018. The consultation was open to citizens (with no age restrictions), businesses and other stakeholders, including Member States. Respondents were asked to:

- Rate their experience with the current clock changes;
- Express a preference between keeping or abolishing the current system and indicate a main reason for their response; and
- Express a preference for choosing either the existing summer-time or the existing winter-time as a permanent standard time zone.

8. The consultation received an unprecedented 4.6 million responses, the highest number ever received by a Commission consultation, of which 99.8% were submitted by citizens. Strikingly, 3.1 million responses (70% of the

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6 Q 3 (Pieter Cleppe)
7 Written evidence from Department for Business, Energy & Industrial Strategy (SCT0023)
11 Ibid.
total) came from Germany. The UK recorded the lowest participation rate, with UK responses only accounting for 0.1% of the country’s population.13

9. 84% of all respondents to the Commission’s consultation supported the abolition of clock changes, with 43% indicating health as the main reason for their preference. 56% favoured the adoption of permanent summer-time in their country. Around 82% of responses from UK citizens and 73% of those submitted by UK businesses and stakeholders supported ending seasonal changes of time. 53% of citizens and 73% of businesses and stakeholders chose permanent summer-time as their preferred option.14

The current proposal

10. On 12 September 2018, the Commission published a proposal that would replace the obligation to apply clock changes with an obligation to discontinue them. Member States would retain the discretion to decide which standard time—permanent winter-time or permanent summer-time—to observe. The Commission initially intended for the last clock change to occur on 31 March 2019 in countries adopting year-round summer-time, and on 27 October 2019 in those choosing winter-time.

11. In the explanatory memorandum accompanying the proposal, the Commission reasoned that abolishing seasonal changes of time would maintain a harmonised approach across Member States while addressing the concerns raised “by citizens, by the European Parliament, and by a growing number of Member States”.15 It found, however, after a review of existing studies, that evidence of the health implications of seasonal changes of time was “inconclusive”.16 A very brief impact assessment noted, in broad terms, that the abolition of seasonal changes of time would “bring about transition costs” in the IT and transport sectors.17

12. As with the 9th Summertime Directive, the legal basis used by the Commission in bringing forward the proposal was Article 114 of the Treaty on the Functioning of the European Union (TFEU), which justifies EU intervention to promote the functioning of the Single Market.

Legislative negotiations

13. The EP adopted its position on the Commission’s proposal on 29 March 2019. While endorsing ending clock changes, the EP proposed a postponement to 2021 and a different implementation process. Under the EP position, Member States intending to adopt permanent winter-time from October 2021 would need to notify the Commission by 1 April 2020. Any such notification would be considered by a ‘coordination mechanism’, made up of the Commission and Member State representatives, to assess the risks to the functioning of the Single Market. If deemed necessary, the notifying Member State would be given an opportunity to revise its choice or set out how it intends to address any implications for the Single Market. The Commission would also be empowered to delay the application of the new Directive by up to

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14 Ibid.
16 Ibid, p 4
17 Ibid, p 6
12 months, or submit a new proposal, if it foresaw significant risks to the functioning of the Single Market. 18

14. Council discussions on the proposal have made little progress since December 2018. In October 2018, the Austrian Council Presidency put forward a compromise text that would postpone implementation of the proposal to 2021 and extend the notification period for Member States from six to 18 months. While the text was welcomed by Member States as a step in the right direction, it has not been taken for a General Approach. 19

15. The Government told us that Member States remained concerned by “the legal basis of the proposal, potential de-harmonisation across the EU and … the Commission’s limited impact assessment”. 20 Added to this, the Irish government reported that the Council Legal Service had, in a June 2019 legal opinion, criticised the proposal for not being sufficiently justified in the light of the principles of proportionality and subsidiarity. 21

16. Three national parliament chambers also raised concerns about the proposal on subsidiarity grounds through the Reasoned Opinion procedure: 22 the Danish parliament, 23 the House of Commons, 24 and the House of Lords. 25 In our Reasoned Opinion, we expressed scepticism about what the Commission called “increased questioning” of the current summer-time arrangements and noted that none of the studies and reports on the application of summer-time cited by the Commission recommended abandoning existing arrangements. We therefore concluded that the proposal’s subsidiarity statement fell short of the requirements set out in Protocol 2 annexed to the Treaty on European Union and the TFEU.

17. The Minister for Small Business, Consumers and Corporate Responsibility, Kelly Tolhurst MP, told us on 24 October 2019 that she expected the Finnish Presidency to “agree some steps” later in 2019. 26 On 2 December 2019, following a Transport Council meeting, Finland’s Transport Minister was

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20 Written evidence from Department for Business, Energy & Industrial Strategy (SCT0023)


22 Under Protocol No 2 annexed to the Treaty on European Union and to the Treaty on the Functioning of the European Union, national parliaments can challenge EU legislation for any failure to comply with the principle of subsidiarity within eight weeks from the date that the proposed legislation is transmitted to them in the official languages of the Union.


25 European Union Select Committee, Subsidiarity Assessment: discontinuing seasonal changes of time (22nd Report, Session 2017–19, HL Paper 200)

26 Q 19 (Kelly Tolhurst MP)
reported as stating that Member States were still unable to establish their positions “because of a lack of information”.27

18. The Minister told us that the Government had opposed the proposal in Council discussions and had worked “hard to create an understanding of the UK’s position” on the proposal.28 She highlighted, in particular, the role of Lord Henley, Parliamentary Under-Secretary of State in the Department for Business, Energy & Industrial Strategy (BEIS) until July 2019, who had engaged bilaterally with EU Ministers about the UK’s concerns.29

This inquiry

19. On 22 October 2018 we published a Reasoned Opinion on the Commission’s new proposal, concluding that it breached the principle of subsidiarity. A response by the Commission followed on 24 January 2019, which in our view did not meaningfully engage with the arguments set out in our report.30 This inquiry has considered the Commission’s proposal in greater depth.

20. Given the Government’s commitment that the post-Brexit transition period will end on 31 December 2020 and the lack of evidence of the proposal currently being prioritised at EU level, it is unlikely that the proposal will be agreed and transposed into Member States’ national law while EU rules remain binding on the UK. Should the proposal eventually become EU law, the UK will be left to decide whether to end its own clock changes in the light of its neighbours abolishing theirs. Any such decision will merit careful consideration.

21. Chapter 2 sets out the various responses to the Commission’s proposal from EU and non-EU countries and representatives of the industries that might be most affected. Chapter 3 sets out the potential implications of any non-alignment between the UK and its EU neighbours on clock changes. Chapter 4 then considers the possible impacts in the UK if both the UK and the EU discontinued seasonal changes of time. Finally, Chapter 5 considers how the UK Government might gather an evidence base to help inform its decision-making should this EU proposal proceed.

22. The EU Internal Market Sub-Committee, whose members are listed in Appendix 1, met in September and October 2019 to take oral evidence, and received 27 pieces of written evidence. Witnesses are listed in Appendix 2. The Committee is grateful for their participation in this inquiry.

23. We make this report for debate.

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28 Q 20 (Kelly Tolhurst MP)
29 Q 19 (Kelly Tolhurst MP)
CHAPTER 2: REACTIONS TO PROPOSALS TO END SEASONAL CHANGES OF TIME

Clock changes in the UK

The history of seasonal changes of time in the UK

24. We are grateful to the Royal Museums Greenwich, and to historian Dr David Prerau, for their clear explanations to us of the history of seasonal changes of time in the UK. We summarise that history below.

25. The idea of adjusting the clocks during the summer to make better use of longer daylight hours was first promoted in the UK by William Willet in his 1907 pamphlet *The Waste of Daylight*. Mr Willet theorised that a one-hour shift would enable workers to start their days earlier and enjoy more leisure time in the evenings. Mr Willet also expected the system to bring economic benefits.

26. Legislation to give effect to Mr Willet’s proposition was defeated five times in Parliament between 1908 and 1916. In May 1916, however, following a similar initiative in Germany, Parliament implemented clock changes to increase economic productivity and reduce fuel consumption as a wartime measure. The clocks were advanced by one hour from 21 May to 1 October.

27. The UK retained seasonal changes of time after the First World War. With the outbreak of the Second World War in 1939, the Government sought to maximise the benefits of summer-time by postponing the autumn clock change to mid-November. This measure was coupled with a shift of time zone: between 1940 and 1941, the UK adopted British Summer Time (BST) as its standard time and BST+1 as its summer-time. The scheme, known as Double Summer-Time, was abandoned at the end of the war but briefly reinstated in 1947 to counter a fuel crisis.

28. 1968 saw the British Standard Time experiment, which introduced year-round summer-time for a time-limited period. In October 1970, the Government published an inconclusive review of the experiment. On 2 December 1970 the House of Commons overwhelmingly voted to end it, owing to strong opposition in the northern parts of the UK—particularly Scotland—and among certain population groups, such as farmers and industrial workers. As a result, the UK reverted to Greenwich Mean Time (GMT) in October 1971, and seasonal changes of time were reinstated from 1972.

29. More recently, several bills have been introduced, unsuccessfully, to bring the UK or parts of it into Central European Time (GMT+1). The latest such attempt was the Daylight Saving Bill, a private member’s bill introduced in 2010 by Rebecca Harris MP. However, none of those bills have questioned the practice of clock changes itself.

Effects of the current system in the UK

30. Some of our witnesses told us that seasonal changes of time played a useful role in the UK. The Scottish Government argued that the current regime

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31 Written evidence from Royal Museums Greenwich ([SCT0022](#)), and Dr David Prerau ([SCT0008](#))
32 HC Deb, 2 December 1970, col 1331
33 Daylight Saving Bill [Bill 260 (2010–12)]
worked “well across the UK as a whole”.\textsuperscript{34} Dr Prerau described the UK’s current time system as “excellent”, offering the benefits of lighter evenings for most of the year, such as “reduced automobile accidents, energy usage, and outdoor crime”, and reducing the effects of darker winter mornings, particularly in northern parts of the UK.\textsuperscript{35}

31. Ulster Farmers’ Union (UFU) noted some negative consequences for farmers of the current clock-change system, which they told us “made the process of getting produce to market much more difficult” and “reduced milk and egg yields”.\textsuperscript{36} However, National Farmers’ Union Scotland (NFUS) told us that “the effect on agriculture” of clock changes had “reduced over the years” because farms were “increasingly mechanised”, with better artificial lighting.\textsuperscript{37}

UK responses to the proposal to abolish clock changes

32. On 29 March 2019, YouGov published the results of a public opinion survey of 9,070 adults living in Great Britain assessing appetite for the Commission’s proposal to discontinue clock changes.\textsuperscript{38} Only 44% of respondents felt that the current daylight saving arrangements should continue.

33. The Scottish Government highlighted that abolishing clock changes would raise “specific socio-economic concerns” for Scotland and the north of the UK, and it raised concern that the Commission’s rationale for the proposal was “not strongly evidence-based”.\textsuperscript{39} NFUS agreed that any changes “would have more pronounced implications for Scotland” than elsewhere in the UK, and it highlighted, for example, the knock-on effects for rural communities if farmers’ working patterns were to shift as a result of abolishing clock changes, with any such change potentially harming the “quality of work and social life for Scotland’s agricultural workers”.\textsuperscript{40}

34. In correspondence, the Minister relayed concerns raised by the Scottish and Welsh Governments about the proposal’s wide-ranging economic implications and its impact on rural communities. She added that Northern Ireland Executive officials had raised similar issues.\textsuperscript{41} Time is a reserved matter in respect of Scotland and Wales, but there is no equivalent reservation or exception for Northern Ireland. We explore the implications of this proposal for Northern Ireland in Chapter 3.

35. We did not receive a response directly from the Welsh Government as part of our inquiry, and YouGov’s March 2019 polling results did not disaggregate Wales as a separate region, reporting statistics for “Midlands/Wales”.\textsuperscript{42} However, in October 2018, shortly after the Commission’s proposal had been announced, then-Finance Secretary Mark Drakeford AM was reported

\begin{thebibliography}{9}
\bibitem{34} Written evidence from the Scottish Government (SCT0019)
\bibitem{35} Written evidence from Dr David Prerau (SCT0008)
\bibitem{36} Written evidence from the Ulster Farmers Union (SCT0017)
\bibitem{37} Written evidence from the National Farmers’ Union Scotland (SCT0028)
\bibitem{39} Written evidence from the Scottish Government (SCT0019)
\bibitem{40} Written evidence from the National Farmers’ Union Scotland (SCT0028)
\bibitem{42} YouGov, op. cit.
\end{thebibliography}
as saying that reforms to daylight saving arrangements were not “a priority” and should be “determined by member states”.43

36. **In the UK, seasonal changes of time facilitate lighter evenings for over half the year and reduce morning darkness in the winter months. The latter effect is most significant in northern parts of the UK. We received no compelling evidence to suggest that the current system of seasonal changes does not work well for the UK. We do, however, note the lack of both contemporary research and public consultation on this issue.**

**Responses across the EU**

37. Several Member States have consulted the public and relevant stakeholders in forming their positions on the Commission’s proposal.

38. The Maltese government undertook a public consultation on clock changes in 2018, which showed that “a majority of stakeholders” favoured permanent summer-time.44 In France, an online consultation was conducted between 3 February and 4 March 2019 at the initiative of the National Assembly’s European Affairs Committee. 2.1 million citizens provided responses. Almost 84% expressed support for an end to daylight saving arrangements, with 59% favouring the adoption of permanent summer-time.45

39. The Belgian House of Representatives adopted a resolution on seasonal changes of time on 7 June 2018. It did not take a firm position but urged the Federal Government to raise the matter at EU level, to make a detailed overall assessment, and to advocate the abolition of seasonal changes of time if that assessment proved them to be unnecessary or unproductive.46

40. Also in 2018, the Dutch government held a public poll and consulted stakeholders. In that poll, retaining the current system of clock changes was the least popular choice, with adopting permanent winter-time the most preferred option, receiving 41% of the votes. The poll results highlighted the Dutch public’s wish to align with neighbouring countries, whatever the outcome.47 The Dutch Tweede Kamer debated the Commission’s proposal, with a majority either supportive of, or neutral on, the proposal to end seasonal changes of time.

41. As noted in Chapter 1, there has been significant opposition to seasonal changes of time in Finland. In its written evidence, the Ministry of Transport and Communications of Finland told us that it had carried out two citizen surveys and “extensive consultation” of other stakeholders. It reported that

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43 Wales Online, ‘How the UK could be forced to scrap daylight saving time by the EU - even though we're leaving’ (22 October 2018): https://www.walesonline.co.uk/news/politics/how-uk-could-forced-scare-15308718 [accessed 10 December 2019]
44 Written evidence from the Maltese Government (SCT0011)
stakeholders were “almost unanimous” in wanting to end seasonal changes of time and that the “majority of Finns” agreed with that position.\textsuperscript{48}

**Ireland**

42. Ireland first introduced seasonal changes of time in 1952, at the same time as the UK, and participated in the UK’s experimental British Standard Time trial in the 1960s. The Irish government’s position on this question is especially relevant to the UK because of the potential effects of any non-alignment on Northern Ireland, discussed in detail in Chapter 3.

43. In October 2018, the Irish government set up an interdepartmental steering group to consider the proposal’s implications for Ireland and help inform the Irish government’s position in Council. That steering group’s public consultation closed on 30 November 2018. There was majority support for abolishing clock changes, but opposition to any measure that would result in Ireland and Northern Ireland having different time zones. A fuller summary is given in Box 1.

**Box 1: Approach and outcomes of the Irish government’s public consultation**

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<td>• An opinion poll of a representative sample of 1,000 respondents;</td>
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<td>• A public survey open to all, which received 16,198 responses; and</td>
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<td>• A targeted invitation to 401 stakeholders to submit written responses, which yielded 170 responses, 114 from individuals and 56 from groups or organisations.</td>
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The opinion poll identified majority (66\%) support for abolishing clock changes, while 82\% of respondents opposed any measure that would result in a different time zone between Ireland and Northern Ireland.

The public survey yielded a larger majority in support of abolishing the changes (81\%), but, when invited to comment, only 67\% of respondents volunteered that the possibility of two time zones on the island of Ireland had affected their response. (See paragraph 127 regarding the questions asked in the Irish consultation.)

The targeted stakeholder consultation yielded no majority for any one outcome, with 38\% in favour of abolishing clock changes, 21\% opposed, and the remainder neutral. Only 9\% of those responding said that two separate time zones on the island of Ireland would be an issue.

*Source: Joint written evidence of Dr Katy Hayward and Ben Rosher (SCT0027)*

44. The final report of the interdepartmental group noted an “absence of significant evidence to support changing the status quo”.\textsuperscript{49} The Irish government has thus opposed the Commission’s proposal in Council. On 27 March 2019, the Taoiseach, Leo Varadkar, emphasised that he would “not wish to countenance a situation whereby Northern Ireland was in a different time zone from the rest of Ireland”.\textsuperscript{50}

\textsuperscript{48} Written evidence from the Ministry of Transport and Communications of Finland (SCT0029)

\textsuperscript{49} Republic of Ireland, Department of Justice and Equality, *op. cit.*, p 3

EU Member States have a range of views on the Commission’s proposal to discontinue seasonal changes of time, but clock changes are a subject of public concern in certain EU Member States, such as Finland and Germany. In recent years, the Commission has come under increased pressure from some of these countries and the European Parliament to reconsider EU summer-time arrangements. Its proposal to discontinue clock changes appears to be a response to that pressure.

One of the drivers behind the Commission’s proposal to discontinue seasonal changes of time was an EU-wide consultation that received 4.6 million responses, 84% of which were in favour of abolishing the clock change practice. We reiterate the conclusion in our 2018 Reasoned Opinion that this response rate, while extraordinary for a Commission consultation, accounts for less than 1% of the EU-28 population, and 70% of those responses came from a single Member State, Germany.

Although there is significant strength of public feeling in favour of abolishing seasonal changes of time, there is little evidence that doing so would lead to a material improvement over the status quo. In bringing forward its proposal to abolish clock changes, the Commission could not produce any conclusive evidence that the practice has material adverse repercussions on citizens or specific sectors. We note that it assessed the evidence on the health implications of seasonal changes of time, which had been highlighted as a concern, for example, in Finland’s citizens’ initiative and the European Parliament’s resolution, as “inconclusive”.

In making its initial proposal, the Commission did not produce a full, detailed impact assessment. While public feeling is strong in some Member States, we believe the Commission should carry out a full impact assessment so that Member States can consider the proposal in the light of all the relevant evidence.

Responses outside the EU

Switzerland introduced daylight saving arrangements in 1981, a few years after a 1978 referendum in which a large majority of Swiss voters (84%) had voted against the adoption of seasonal changes of time.

In 2010, the Swiss government rejected a parliamentary motion to abolish clock changes, saying that to do so would result in Switzerland becoming an “island” (an “îlot de temps”) for six months of the year, with “considerable inconveniences for the Swiss economy”. It explained that removing economic inconvenience caused by non-alignment with its near neighbours, which as members of the EU had all adopted synchronous clock changes by 1980, was a key motivation for the 1981 adoption of clock changes in the country. 51

In response to the European Commission’s new proposal, the Swiss government again noted the risk of Switzerland becoming isolated if it did not keep step with the EU seasonal changes of time system, with consequences

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CLOCK CHANGES: IS IT TIME FOR CHANGE?

for commercial trade, transport, tourism and communications. However, a 2019 federal popular initiative in Switzerland is seeking another referendum about clock changes. A minimum of 100,000 signatures is required to trigger one, and the deadline for collecting signatures expires in October 2020. It is not known how many signatures have been collected to date.

52. No public consultation had been conducted in Norway at the time of the Royal Norwegian Ministry of Trade, Industry and Fisheries’ response to us. Although the Norwegian government had yet to take a position, the Ministry’s preliminary view was that there was “no strong reason” to keep seasonal changes of time, and it considered it more advantageous to “follow the same time regime as [Norway’s] neighbouring countries, and other important trading partners”.

Responses from industry

53. We heard from representatives of several industries and sectors as part of this inquiry. Almost all emphasised the need for Member States to coordinate their time arrangements. For example, UFU highlighted that “any non-coordinated response” to the proposal to abolish seasonal changes of time could “disturb the operation of the single market” and result in “huge fragmentation”. Airlines for Europe (A4E) also considered it “imperative” that the choice of standard time was “synchronised between all EU Member States”.

54. In October 2018 A4E, Airlines International Representation in Europe, the European Regions Airline Association, and the International Air Transport Association (IATA) published a joint position paper on the proposal. They warned that, “without complete synchronization”, the aviation industry would be “left in chaos”, as clock changes were “built-in to airlines business models, seasonal planning, fleet and crew planning and rostering, and schedules”.

55. Witnesses from industry also highlighted the importance of adequate lead time to prepare for any change. A4E noted the “complex exercise” required to accommodate the discontinuation of seasonal changes of time, with airlines operating flights to or from slot-coordinated airports having to bid for new slots either for the summer season, where winter-time was adopted, or vice versa. They suggested that this “could last for years”, and that the aviation sector would need at least 18 months from the publication of the new directive to prepare. In oral evidence, Philip Ireland, Manager, International Air Transport Association (IATA), clarified that 18-month lead time would need to begin at the time of an existing clock change, meaning that in fact the industry would need “two years … bare minimum” to prepare.

56. Jonathan Skeet, a software engineer, addressed the impact of abolishing clock changes on software and computer-based clocks, noting that he had

52 Ibid.
53 Written evidence from the Royal Norwegian Ministry of Trade, Industry and Fisheries (SCT0026)
54 Written evidence from the Ulster Farmers Union (SCT0017)
55 Written evidence from Airlines for Europe (SCT0016)
57 Written evidence from Airlines for Europe (SCT0016)
58 Q 15 (Philip Ireland)
“observed a number of countries making time zone rule changes with only days before the change takes effect”, causing “significant disruption” because of the challenge of updating technology. The Internet Assigned Number Authority (IANA), which supplies time zone data to “most of the computing world”, told us that a lead time of at least one year would be necessary. Mr Skeet suggested that a lead time of two years would “help significantly”, as updating time zone data in computer-based devices had multiple steps, involving both operating systems and individual users. He added, though, that synchronising any UK abolition of clock changes with any EU change would be preferable, even if it resulted in a shorter lead time.

57. More broadly, the UK Trade Policy Observatory (UKTPO) highlighted both the re-organisation of working hours that would have to take place across all employers if clock changes were abolished, and the potential “negative impact on decision making and job performance” of existing seasonal changes of time, particularly in the financial sector.

58. Across both EU and non-EU countries, national and industry responses to the Commission’s proposal highlight the importance of coordination and minimising barriers to trade when it comes to time arrangements.

59. While the complexity of adapting to an end to seasonal changes of time, and the time needed to prepare for such a change, vary between sectors, it seems that at least 18 months’ notice will be required for some industries, such as aviation, to adapt effectively. This should be accounted for in any timetable if this proposal proceeds.

59  Written evidence from Jonathan Skeet (SCT0021)
60  Written evidence from the Internet Assigned Numbers Authority (SCT0004)
61  Written evidence from Jonathan Skeet (SCT0021)
62  Written evidence from UK Trade Policy Observatory (SCT0015)
CHAPTER 3: THE IMPLICATIONS OF NON-ALIGNMENT FOR THE UK

60. As we noted in Chapter 1, if the Commission’s proposal is eventually agreed, this is highly likely to be after the post-Brexit transition period, and EU law will no longer apply to the UK (see paragraph 20). If the Government chose to retain clock changes in the UK, there would be variable time differences between the UK and its EU neighbours during the year. This chapter considers some of the implications of such non-alignment.

Trade implications

61. Dr Heather Rolfe, Head of Research, Demos, argued that the implications of non-alignment could be of a different order of magnitude to those of existing time zone differences: “If there is non-alignment all year round”, as with existing time zones, “it is predictable”, but “if for half the year there is alignment and for the other half there is not, that is when complexity is added.” She suggested that non-alignment could affect externally facing sectors of the UK economy such as “transport, tourism and trade” and “add cost at a time when businesses will be under more strain because of Brexit”.

62. The Scottish Government also recognised the implications for “sectors and companies involved in export markets” in the form of “additional administrative activity”. According to Dr Katy Hayward, Reader, Queen’s University Belfast, and Senior Fellow, The UK in a Changing Europe, non-alignment would “affect predictability” for firms, which she described as “one of the key concerns in trade”. Duncan Edelsten, a private individual, also argued that non-alignment on clock changes could make UK-EU trade “more inconvenient”.

63. UKTPO could not identify any study on the implications of clock changes arrangements for inter-country trade. It noted, however, that academic literature on time zones pointed towards “the desirability of minimizing time differences between trading partners, in particular where these differences are above 1.5–2 hours”. It therefore suggested that the potential three-hour time difference that could arise between the UK and EU countries in the Eastern European Time Zone (such as Finland), if the former retained clock changes and the latter adopted permanent summer-time, could negatively affect UK trade with these countries. They told us that the manufacturing sector was likely to be hit the hardest, through “higher communication costs and non-overlapping working hours”, with services that “require real time interaction for delivery” also affected.

63  For example, if clock changes were abolished in the EU, France might decide to apply its winter-time (equivalent to GMT+1) year-round. If the UK retained its seasonal changes of time, it would continue to be one hour behind France in the winter months but move into France’s time zone during spring and summer. Conversely, if France had opted for permanent summer-time (GMT+2), the UK would be two hours behind France during winter and one hour behind it for the rest of the year.

64 Q 5 (Dr Heather Rolfe)
65 Written evidence from the Scottish Government (SCT0019)
66 Q 5 (Dr Katy Hayward)
67 Written evidence from Duncan Edelsten (SCT0001)
68 Written evidence from UK Trade Policy Observatory (SCT0015)
Gas and electricity markets

64. Ofgem provided an “initial assessment” of the implications of the proposal to end clock changes in the EU on Great Britain’s gas and electricity market. Great Britain’s gas and electricity markets are connected to EU markets through interconnectors, which allow energy to be imported and exported according to market signals. Great Britain tends to import energy when GB prices are high, such as when it is cold, and exports when GB prices are “lower compared to other markets”. Thus, the benefits of interconnectors derive, at least in part, from non-coincident peaks in demand.

65. There are currently three electricity interconnectors between Great Britain and Belgium, France and The Netherlands respectively, and two with Ireland. All operate in both directions. Plans are also underway to create “a pipeline of new interconnectors that could increase total GB electricity interconnector capacity from 5 GW to 16 GW”. Gas interconnectors are also in place between Great Britain and Belgium, The Netherlands and Ireland.

66. Ofgem explained that its economic analysis of the new planned electricity interconnectors was based on the “current seasonal time changes”, which give rise to “consistent differences … between Great Britain and continental electricity markets”. If Great Britain’s “peak times” “aligned with other markets, this would impact interconnector flows”, possibly “reduc[ing] the potential benefits of new projects”. In contrast, Dr Justin Andrews, Head of Design Authority, ELEXON, told us that peak times could play a less significant role for the operation of interconnectors in future: “The aim of the energy industry in future is to … remove peaks, using things like batteries and storage to try to smooth off.” He said that non-alignment between the UK and the EU would require “a fringe change to the computer systems of people who are either operating the electricity interconnectors or trading over them”.

67. Ofgem said that a more detailed assessment of the economic effects of the proposal would be required when “the final arrangements [were] clearer”, but it considered that the abolition of seasonal changes of time in either the UK, EU, or both, would not “fundamentally change supply and demand levels” of gas and electricity in Great Britain. It expected no “material impact on wholesale gas and electricity prices”.

Aviation

68. Mr Ireland of IATA highlighted that, even if the UK retained clock changes after leaving the EU, airlines flying between slot-coordinated airports in the UK and EU would need to review their schedules to accommodate the new time arrangements of EU Member States. He told us that EU routes represented 50% of traffic at Heathrow and between 70% and 87%

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69 Written evidence from Ofgem (SCT0018). Ofgem has responsibility for gas and electricity markets in Great Britain, but not Northern Ireland.
70 Ibid.
71 Ibid.
72 Ibid.
73 Q 14 (Dr Justin Andrews)
74 Written evidence from Ofgem (SCT0018)
75 Level 3 airports, or slot-coordinated airports, are those where the transport demand of airlines exceeds the airport capacity for significant periods and all airlines must be allocated a slot, authorised by a coordinator, in order to land or take off. They are also called “fully coordinated airports”.

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in the other six UK airports classified by IATA as Level 3, that is, with high congestion levels.\textsuperscript{76}

**The Government’s position**

69. The Government stated that it had “no plans to implement this proposal” after the UK’s withdrawal from the EU.\textsuperscript{77} The Minister reiterated the Government’s opposition to the proposal in oral evidence, but recognised that the Government would “need to go away and consider [its] response” if the proposal were to become EU law.\textsuperscript{78}

**Precedents for non-alignment**

70. Dr Andrews asked whether any lessons could be learned from the period until 1995 when the UK and Ireland switched to winter-time one month later than other EU Member States.\textsuperscript{79} The Minister told us that there had been no analysis of the economic evidence from those years.\textsuperscript{80} In proposing full harmonisation of the dates of clock changes in 1993, the Commission cited a “study” highlighting “numerous drawbacks for consumers and … sectors” as a result of non-alignment, but that study does not seem to be publicly available.\textsuperscript{81}

71. A more recent example of non-alignment within Europe is provided by Turkey, where clock changes have been discontinued and permanent summer-time applied since 2016. As a result, the time difference between Turkey and EU countries has increased by one hour during winter-time, reducing the number of common operating hours between Turkish and EU businesses. The Turkish Industry & Business Association (TÜSİAD) told us that, in the experience of its members, this was “an indirect barrier to trade in goods and service alike”. TÜSİAD noted the three-hour difference between Turkey and the UK, which means that, “when the UK reaches early afternoon, Turkey is fast approaching close of business”. On the other hand, the Turkish government had received “no negative feedback” about the change, including “from the Turkish Airlines and financial institutions which were expected to be affected the most from the transition”.\textsuperscript{82} Mr Ireland, however, told us that one airline operating in Turkey did experience connectivity impacts because of its decision to maintain its schedules in Coordinated Universal Time (UTC), rather than making changes according to the new local time, which meant it could no longer offer “preferred times” to consumers.\textsuperscript{83}

72. Dr Prerau pointed to examples of non-alignment in the Americas, such as the province of Saskatchewan, Canada, which had “followed year-round standard time for many years”, despite neighbouring provinces observing clock changes, and the US state of Arizona, which experiences non-alignment both within and without:

“During each summer the following occurs: the semi-autonomous Hopi Native American Reservation follows standard time. The Hopi

\textsuperscript{76} Q 14 (Philip Ireland)  
\textsuperscript{77} Written evidence from Department for Business, Energy & Industrial Strategy (SCT0023)  
\textsuperscript{78} Q 24 (Kelly Tolhurst MP)  
\textsuperscript{79} Q 13 (Dr Justin Andrews)  
\textsuperscript{80} Q 25 (Kelly Tolhurst MP)  
\textsuperscript{81} Proposal for a Seventh Council Directive on summer-time arrangements, COM(93)439, p 1  
\textsuperscript{82} Written evidence from the Turkish Industry & Business Association (SCT0025)  
\textsuperscript{83} Q 16 (Philip Ireland)
Reservation is surrounded by the Navajo Reservation, which follows [Daylight Saving Time (DST)]. The Navajo are surrounded in Arizona by the rest of the state, which uses standard time. And the state of Arizona is surrounded in the US by all its neighboring states, which follow DST.”

73. Some witnesses also referred to the patchwork of time arrangements existing in Australia. As Dr Prerau put it:

“Some provinces utilize DST, and some, in the same time zone, do not. This, combined with Australia’s three time zones, yields a yearly summer situation where there are five different times in Australia for all the summer months, while only three different times (following the time zones) in winter.”

74. Chris Pearce, a historian of seasonal time arrangements in Australia, focused on Queensland, which, unlike neighbours to the south, does not observe clock changes. He told us that there was much public debate about whether Queensland should align to its neighbours’ time arrangements, with southern parts of the state supporting alignment and northern regions emphasising the incompatibility of clock changes with the local climate. He noted that non-alignment tended to “cause a lot of inconvenience” to people regularly crossing the border (such as for work or study), but also to businesses and government because of the reduced number of common working hours. A 2013 survey conducted among 2,300 Queensland businesses by the Chamber of Commerce & Industry Queensland had estimated the cost of non-alignment at $4.35 billion a year, although Mr Pearce cautioned that this figure was based on “information given by only a little over a quarter” of respondents.

75. We heard general concern that variations in the time differences between the UK and its EU neighbours might add complexity for UK businesses trading with the EU. Evidence on this point was, however, far from detailed or conclusive.

76. We are surprised that the available evidence regarding the consequences of non-alignment is relatively scant. Further research is needed into the general effects of clock changes, as well as the specific impacts for people and businesses of non-alignment of seasonal changes of time, for example as experienced in Australia and North America.

77. From the evidence we heard, it was clear that non-alignment could lead to an increase in the time differences between the UK and its EU trading partners, reducing the number of common operating hours for businesses. Academic studies, and anecdotal evidence from Turkey and the Australian State of Queensland, suggest that this could pose an obstacle to trade in some sectors. Moreover, any change to the time differences between the UK and EU could alter the economic benefits of gas and electricity interconnectors.

84  Written evidence from Dr David Prerau (SCT0008)
85  Ibid.
86  Written evidence from Chris Pearce (SCT0024)
78. Considerably more evidence is also required to understand the implications of the Government’s current plans to retain clock changes even if the EU abolishes them. A starting point could be provided by evidence from the pre-1996 period, when the timing of the autumn clock change was not fully harmonised across the European Economic Community.

The implications for Northern Ireland

79. If Ireland discontinued clock changes while the UK retained them, Ireland and Northern Ireland could find themselves on different times for five or seven months a year, depending on the permanent time zone chosen by Ireland.

80. Time is a reserved matter for Scotland and Wales, but there is no equivalent exception or reservation for Northern Ireland. The Minister told us that the Northern Ireland Executive would have full discretion over its time arrangements and could choose between a time border with Ireland and one with Great Britain in the event of non-alignment. However, under the terms of the Withdrawal Agreement between the UK and the EU, and the Protocol on Ireland/Northern Ireland, Northern Ireland is required to maintain close alignment with the EU’s Single Market rules. Given the single-market legal basis of the proposal to abolish seasonal changes of time (as noted in paragraph 12), it is difficult to be clear whether Northern Ireland would be free to choose a time border with Ireland, should it so wish.

81. The Centre for Cross Border Studies noted that any time border would “offend either nationalist or unionist sensitivities” and “add to the stresses imposed on the [Good Friday] Agreement as a result of the wider context resulting from Brexit”. For the duration of our evidence-taking, the Northern Ireland Assembly and Executive were suspended, being restored in January 2020 after three years. This prevented us from seeking evidence directly from either the Northern Ireland Executive or Assembly members. However, Dr Hayward noted that the devolved institutions would have an important part to play in making decisions about time arrangements, and that the absence of those institutions would complicate the “decision-making for Northern Ireland in managing the working out of any time zone change”.

A time border on the island of Ireland?

82. The depth of economic and social integration in the border region of Ireland/Northern Ireland is widely recognised. Data by the Northern Ireland Statistics and Research Agency (NISRA) shows that, in 2017, exports of goods and services from Northern Ireland to Ireland amounted to £3.9 billion (6% of Northern Ireland’s exports). Of these, 47% were attributable to 94% of Northern Ireland small and micro-businesses—those with fewer than 50 employees.
employees. Imports from Ireland to Northern Ireland were £2.2 billion. Dr Hayward highlighted to us that Northern Ireland’s exports to Ireland, while smaller in value than those to Great Britain, were not so in volumes.

83. Cross-border movements between Ireland and Northern Ireland are more difficult to quantify, owing to the lack of comprehensive, comparable statistics. A September 2017 study by the Office for National Statistics (ONS) estimated 110 million border crossings annually “for all reasons including work, business, trade, education, health and family reasons”. The 2011 censuses for Ireland and Northern Ireland found that 14,800 people regularly travelled across the land border for work or study, of which 6,500 travel from Ireland to Northern Ireland and 8,300 in the other direction. A 2016 report by the Centre for Cross Border Studies placed the total number of cross-border work commuters between 23,000 and 30,000.

84. Witnesses told us that non-alignment of time arrangements would be, in several respects, at odds with the organisation of life along the land border. Respondents to a 2019 survey in the Central Border Region, which Dr Hayward and Ben Rosher summarised in their written evidence, said that it would become much more difficult to coordinate within households or rely on facilities and services on the other side of the border. The Centre for Cross Border Studies agreed that different opening hours could be a barrier to accessing “essential services” such as “schools, colleges, health service providers, post offices and retail”, noting that cross-border workers “with childcare or other care responsibilities” would be especially affected.

85. In oral evidence, Dr Hayward focused on cross-border transport services and the complexity of adjusting to time differences for some of the year: “It would be a matter not just of changing schedules but of synchronising timetables so that you can make sure that a bus meets a particular train to get to a particular ferry, for example.” The Centre for Cross Border Studies noted that non-alignment for only part of the year would be particularly disruptive.

86. Dr Hayward told us that certain population groups in the border region were particularly reliant on public transport, such as commuting nurses, who formed “a substantial proportion of the cross-border workers”. She also gave the example of children from Northern Ireland attending school on the other side of the border, who could be further disadvantaged if the Irish

93 Q 7 (Dr Katy Hayward)
97 Centre for Cross Border Studies, Border people briefing
98 Written evidence from Dr Katy Hayward and Ben Rosher (SCT0027)
99 Written evidence from the Centre for Cross Border Studies (SCT0010)
100 Q 7 (Dr Katy Hayward)
101 Written evidence from the Centre for Cross Border Studies (SCT0010)
102 Q 7 (Dr Katy Hayward)
Department for Education were to adjust school times in the event of Ireland adopting a year-round time zone.103

87. The Royal Society for the Prevention of Accidents (RoSPA) told us that an asymmetry in time arrangements might exacerbate driver fatigue among “communities and those driving early and late in the day” in the Irish border region, so increasing the risk of road accidents.104

88. The Centre for Cross Border Studies hinted at the possible loss of productivity across companies employing cross-border workforce.105 More broadly, the evidence we received indicates that a time border would pose various challenges to businesses in Northern Ireland. The Northern Ireland Chamber of Commerce and Industry (NI Chamber) referred to a 2017 study indicating that “each hour of time difference reduce[d] international goods trade by between 2% and 7%”.106 Dr Hayward agreed that “adding a time difference to trade” was “like adding distance to trade”.107 The UKTPO, on the other hand, concluded that “a time difference of one hour at the border with Ireland should not have a material impact on international trade”.108

89. The NI Chamber noted that firms that operated on both side of the border could experience difficulties with their “systems, communications, logistics which in turn could have costs implications at the very least in the short term”.109 Dr Hayward highlighted the importance of efficient logistics operations for the all-island economy: “We have very closely integrated supply chains, and a third of that trade is in agrifood, so we have just-in-time elements coming in there.”110 The Freight Transport Association (FTA) gave the example of a lorry leaving Newry in Northern Ireland at 7 am and arriving in Dundalk after 20 minutes: “In Irish/EU time it may only be 06.20 with the premises not opening until 07.00hrs therefore the driver is left sitting for 40 minutes to unload.” If, on the other hand, Ireland were one hour ahead, by the time the lorry arrived the deposit would have been “open for one hour and awaiting delivery of goods”. As a result, “the business in Northern Ireland would have to open earlier and pay extra costs to ensure their working timeline corresponded with businesses just over the border”.111

90. Several witnesses emphasised the risks for smaller operators, which, as Dr Hayward told us, represent the vast majority of business in Northern Ireland.112 The Centre for Cross Border Studies observed that the burden resulting from a time border “may not be prohibitive” in absolute terms, but could become so for “smaller enterprises or those operating on already tight profit-margins, especially in the context of Brexit”.113 The NI Chamber raised similar concerns.114

91. Finally, Ireland and Northern Ireland are both part of the Single Electricity Market (SEM). SONI Ltd, which operates the SEM’s transmission systems
for Northern Ireland, told us that, while the SEM’s internal systems were set in UTC, and so would not be affected by non-alignment of clock changes, it would be necessary to retain a “common system wide” time for settlement and balancing reports exchanged between the SEM and market participants. Further, since the SEM was “legally designed to have one time corresponding to the time in Belfast”, it would “continue to operate according to the time requirements of Northern Ireland”.

92. **We received substantive evidence that a time border between Ireland and Northern Ireland would have wide-ranging practical repercussions for individuals and businesses. A time difference for only some of the year, in a scenario where one part of the island of Ireland retains seasonal changes of time, would add greater complexity.**

*A time border with Great Britain?*

93. The implications of a time border between Northern Ireland and Great Britain received considerably less attention from our witnesses. IANA noted that, if Northern Ireland followed different time arrangements to Great Britain, “a new entry ‘Europe/Belfast’” would have to be created in IANA’s time zone database. Moreover, competent authorities would need to specify the official name and abbreviation to be used for identifying Northern Ireland’s time arrangements, “to avoid naming confusion in computer applications”.

*The Government’s position*

94. The Government’s evidence made no reference to the specific implications of the Commission’s proposal for Northern Ireland. When asked, the Minister told us that the Government “completely [opposed] anything that would create a time border on the island of Ireland”. Asked whether the Government had assessed the implications of such a time border, she stated: “We are unclear whether this EU regulation will become law. We are waiting to see what the impacts are and we do not have a clear timetable.”

95. While reiterating that that it would be for a future Northern Ireland Executive to set its own time arrangements, the Minister told us that the Government would not favour a time border between Northern Ireland and Great Britain: “We want the whole of the UK and Northern Ireland to operate within the same timeframe.” Nevertheless, she said that the Government had not done any work on the implications of a domestic time border: “It would be very difficult to give an opinion if we had to decide what would be the best way forward.”

96. **If the EU were to discontinue seasonal changes of time but the UK decided to retain them, a future Northern Ireland Executive would have to choose between having a one-hour time difference for part of the year either with the Republic of Ireland or with the rest of the UK.**

97. **Regions along the Ireland-Northern Ireland border share deep economic and social ties. Supply chains are closely integrated. It is normal to work or rely on public services, such as hospital and**

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115 Written evidence from SONI Ltd (SCT0013)
116 Written evidence from the Internet Assigned Numbers Authority (SCT0004)
117 Q 27 (Kelly Tolhurst MP)
118 Ibid.
schools, on the other side of the border. There is no question that a
time border would have enormous practical implications for firms
and citizens in Northern Ireland, disrupting well-established ways of
doing business and organising daily life.

98. We note that the Government has recently negotiated a Withdrawal
Agreement with the EU that ties Northern Ireland closely to the
rules of the EU’s Single Market. In evidence, the Minister repeatedly
emphasised Northern Ireland’s autonomy to set its own time
arrangements in the future. However, were this proposal to become
EU law under its current single-market legal basis, Northern Ireland
may be obliged under the terms of the Withdrawal Agreement and
the Protocol on Ireland/Northern Ireland to align with the EU and
thus institute a time border with Great Britain. We suggest that the
Government should give urgent further consideration to the impact
that the Withdrawal Agreement and its Protocol on Ireland/Northern
Ireland will have on the ability of Northern Ireland to make its own
arrangements in future.

99. The implications of a time border between Northern Ireland and
Great Britain have attracted less attention and are therefore not well-
understood, but in addressing the question of the ability of Northern
Ireland to make its own arrangements in the future, we also ask
the Government to assess the likely economic impact on Northern
Ireland/GB trade of different time zones within the UK as a result of
the obligations set out in the Withdrawal Agreement.
CHAPTER 4: ENDING CLOCK CHANGES IN THE UK

100. Even if the UK were not obliged to abolish seasonal changes of time, any future Government could decide to do so, either unilaterally or after weighing the consequences of its EU neighbours doing so. This chapter considers what such a change might mean for different economic sectors and how the implementation of either permanent winter-time or summer-time might affect different industries and parts of the UK.

Implications of abolishing clock changes

Aviation

101. As we explained in Chapter 2, abolishing clock changes would impose an onerous rescheduling exercise on airlines operating to, from and within Europe (see paragraphs 54 and 55). Mr Ireland of IATA felt that the UK aviation sector would be no exception, given the congestion at UK airports and legal constraints such as night restrictions. While he was concerned that the abolition of clock changes would be “a bit of disaster” for the UK aviation industry, the complexity of the issues was such that he found it impossible to provide an estimate of costs. He told us that an estimate could be produced by involving “co-ordination organisations in Europe and the UK”, but even then, “we would still be guessing what other capacity inputs and factors had an impact on those decisions”.

Gas and electricity markets

102. Ofgem told us that, if clock changes were discontinued, “multiple components” of Great Britain’s market governance framework would need updating, possibly through both “legislative changes” and “changes to the industry licences and codes”. There would be “an initial administrative cost”, but operators in both the gas and electricity sectors had “well established procedures” for managing changes to time arrangements. Ofgem suggested that, beyond the initial implementation effort, the abolition of clock changes could benefit the energy and gas sectors, through “simplifying market rules and operations”.

103. A similar view was taken by ELEXON, which administers the Balancing and Settlement Code (BSC) for the electricity sector in Great Britain: “Discontinuing [seasonal changes of time] would reduce some of the complexity and risk associated with the two clock change days.” ELEXON told us that, from an industry perspective, abolishing clock changes would require a “co-ordinated industry implementation project”, involving “central BSC systems, industry market participants (such as suppliers and generators), power exchanges and organisations that either trade over or operate an electricity interconnector” with an EU Member State.

Timekeeping

104. The National Physical Laboratory (NPL), which is responsible for the UK’s measurement systems, told us that abolishing seasonal changes of time would have no implications for precise time-keeping in the UK, which is based...
on UTC and relies on “continuously-running commercial atomic clocks”. Adjustments would, however, be required to the UK’s national radio time signal, MSF:

“The signal carries a time code that provides the current UK civil time, taking into account the existing seasonal time changes … If the proposal to end seasonal time changes is adopted in the UK, the service can be configured to disseminate the new form of UK civil time and the large number of clocks in the UK synchronised to the signal should continue to operate correctly.”

105. Referring to computer-based clocks, IANA stated that “it would not be much of a problem to accommodate the abolition of twice-yearly clock changes”, provided there was a sufficient lead-in time.125 Mr Skeet, a software engineer, explained that updating devices’ time information would involve several steps and actors, including IANA, operating system maintainers, and end users.126

106. IANA made several suggestions about how to facilitate the transition to a year-round time zone for application developers:

- First, “the UK should record in a single public document all related changes to civil time, so that interested parties can easily track the timekeeping changes”;

- Second, should the UK adopt GMT+1 year-round, this should be described as the UK’s new ‘standard time’ rather than ‘permanent summer-time’, since the latter is not supported by the most widely used development standard; and

- Third, “the UK should specify names and abbreviations recommended for any new timekeeping practices”. IANA noted, for example, that “many English-language computer systems would call” permanent summer-time “‘British Standard Time’, following the historical practice for the UK from 1968 to 1971”.

107. The abolition of seasonal changes of time in the UK in any circumstances would require adjustments in a range of sectors, from transport to energy and software development. Such adjustments would bring some transition costs, which could be burdensome for industries where scheduling, especially internationally, is of concern, such as aviation. We received, however, no estimate of the potential size of these transition costs for any industry, or for the economy as a whole.

The choice between winter-time or summer-time

108. Several witnesses engaged with the question of whether it would be more beneficial for the UK to adopt permanent winter-time or summer-time. Although this was outside the scope of our inquiry, we summarise their views below as an illustration of the competing interests that would be involved.

124 Written evidence from the National Physical Laboratory (SCT0005)
125 Written evidence from the Internet Assigned Numbers Authority (SCT0004)
126 Written evidence from Jonathan Skeet (SCT0021)
127 Written evidence from the Internet Assigned Numbers Authority (SCT0004)
The case for permanent summer-time

Road safety

109. RoSPA, a road-safety charity that has long campaigned for lighter evenings, told us that a move to permanent summer-time “could save an estimated 30 lives [annually] by providing an extra hour of usable daylight during the autumn and winter”. RoSPA reasoned that the number of road accidents generally peaks in the afternoon, owing to greater driver fatigue and longer journey times for drivers and pedestrians. In addition: “Every autumn when the clocks go back and sunset occurs earlier in the day, road casualties rise”.128

110. RoSPA backed its argument with road accident figures from the 1968–71 British Standard Time experiment, showing that during the experiment casualties fell by 11% in England and Wales and 17% in Scotland. RoSPA cautioned, however, that the “experiment coincided with the introduction of road side breath tests and the 70mph speed limit”,129 and we note also that other potential confounding factors exists, such as the overall amount of daylight in the winter and seasonal changes in weather, which need to be accounted for in a systematic way.130 Nick Lloyd, Head of Road Safety, RoSPA, drew attention to a 2018 study by the RAC Foundation and Road Safety Analysis, which indicated that, between 2012 and 2017, there were “204 more personal injury collisions per year over the two fortnightly periods when the clock changes took place”. He was unable to identify any evidence from other countries in the same latitude as the UK, but believed that similar conclusions would also be drawn in countries such as Germany or France.131

Trade

111. UKTPO held that permanent summer-time would be preferable from a trade perspective, minimising time differences between the UK and EU countries.132

112. A4E and Mr Ireland agreed that adopting permanent summer-time could mitigate the impacts on the aviation industry, not least because the IATA summer-season—coinciding with summer-time in the EU—was “10 weeks longer than the winter season” and fell “when demand [wa]s highest”.133 Mr Ireland suggested that the adoption of permanent winter-time would have longer-term repercussions for long-haul services. He focused on flights from North America landing in Heathrow between 6 am and 7 am, telling us that while rescheduling them to a later time would prove difficult due to high congestion levels, bringing them forward might be difficult because of restrictions on night-flights, or simply unprofitable.134

The case for permanent winter-time

113. Except for ELEXON, which would find a move to year-round GMT “marginally easier” for technical reasons,135 witnesses based their case for permanent winter-time not so much on its benefits as on the expected

128 Written evidence from the Royal Society for the Prevention of Accidents (SCT0006)
129 Ibid.
130 Q 17 (Nick Lloyd)
131 Q 11 (Nick Lloyd)
132 Written evidence from UK Trade Policy Observatory (SCT0015)
133 Written evidence from Airlines for Europe (SCT0016)
134 Q 11 (Philip Ireland)
135 Written evidence from ELEXON (SCT0014)
drawbacks of permanent summer-time, particularly for northern parts of the UK.

114. The Scottish Government noted that “if clocks were not to be turned back an hour in winter, Scotland would have no daylight between 8 am and 9 am”. It expressed alarm that this would expose children going to school to greater dangers from traffic.136 Similar concerns about the impact on Scotland were voiced by NFUS.137 Mr Lloyd agreed that the perception that darker winter mornings would reduce road safety was widespread “among the general public, certainly in Scotland”, though he believed it stemmed from “misinformation”.138

Farming

115. NFUS warned that, despite the modernisation of farming practices, carrying out farm work in the dark remained “inherently more dangerous than doing it during daylight”. Nor would adjustments to existing work practices be always possible: “For example, gathering livestock in the morning to go to the market for opening cannot always be delayed”.139 UFU concurred that permanent summer-time “would be deemed incompatible with the needs” of farmers.140 The National Farmers’ Union (NFU), however, held that “whether an extra hour’s daylight would be more beneficial in the morning or the evening depends on [the] individual farm and farmer”.141

Other factors

116. Ofgem did not take a view on which permanent time zone might be preferable from the perspective of gas and electricity markets. It recommended, however, that developments in the technology (for example, solar) connected to Great Britain’s energy system and its “operational patterns” should be considered in any future decision. It also made the point that adopting a permanent time zone might “shift demand” by moving “economic activity to periods of the day” with “more or less light”, or when it was “warmer or colder”.142 Dr Andrews told us that there was currently “no model” to quantify the economic implications of a shift in electricity demand patterns.143

117. Our short inquiry has highlighted the diversity of views on what time arrangements would best serve the UK, and the difficulty of choosing a permanent time zone, if the UK were to do so.

118. The benefits and drawbacks of permanent winter- or summer-time are likely to vary across sectors and regions and are not easily comparable or quantifiable. We recommend that any assessment of the two options should focus, as much as possible, on areas where it might be possible to collect hard evidence—for example, the costs to the aviation sector.

119. Road safety is a conspicuous example of how, even within one sector, there are conflicting views on the relative benefits of permanent

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136 Written evidence from the Scottish Government (SCT0019)
137 Written evidence from the National Farmers’ Union Scotland (SCT0028)
138 Q 12 (Nick Lloyd)
139 Written evidence from the National Farmers’ Union Scotland (SCT0028)
140 Written evidence from the Ulster Farmers Union (SCT0017)
141 Written evidence from the National Farmers’ Union (SCT0003)
142 Ibid.
143 Q 14 (Dr Justin Andrews)
winter- or summer-time. We note that some of the evidence cited by witnesses was several decades old and difficult to use to draw conclusions about seasonal changes of time given other confounding factors, such as the introduction of speed limits. We note also that, at least in the evidence we received, it was not wholly clear how “accidents” were being defined in statistics regarding road safety and changes of time.

120. We recommend that the Government look widely to all existing sources of evidence, seeking in particular studies relating to countries in a similar geographical position as the UK, including studies in the Nordic countries, and compile clear figures relating to road safety in the periods after the clock changes occur, to help identify the right course of action if clock changes are to be abolished.
CHAPTER 5: CONSULTATION AND STAKEHOLDER ENGAGEMENT

Consulting the public

121. As described in Chapter 2, several EU Member States have consulted widely on the proposed abolition of seasonal changes of time, and the results have informed the positions of these Member States at Council. We asked whether the Government should also consult on the proposal’s implications for the UK—including in circumstances where the UK was under no obligation to implement the proposal after it had been adopted—and, if so, when consultation would be appropriate and how it should be designed.

122. We heard conflicting views. While Mr Edelsten and Susan Hedley were unequivocally in favour of consultation, the Scottish Government saw no “obvious or compelling” rationale for a public consultation, given the “ongoing uncertainties” around the proposal’s implications for the UK. RoSPA questioned the appropriateness of consultation on this matter, noting that the Government’s decision “should be led by evidence rather than public opinion”. Mr Lloyd from RoSPA elaborated: “We have to think carefully as to whether consultation is the correct way forward, unless there is clear information that sets out carefully what the positive and negative effects would be”.

123. Other witnesses, while recognising the need for input by the public into the decision-making process, expressed a range of views on the format and timing of any consultation.

Options for a public consultation

124. Several witnesses questioned the suitability of an open consultation—such as that conducted by the Commission in the summer of 2018—for surveying the public on the abolition of clock changes. Mr Pearce, a historian of seasonal changes of time, observed that open consultations were more likely to engage “people with stronger views” on the matter, possibly “boosting the percentage” of responses in favour of discontinuation. Dr Rolfe of Demos agreed, and also argued that consultations tended to fail to reach certain groups, such as the disabled and those without an Internet connection—the latter, she told us, accounted for 10% of the population in the UK and 14% in Northern Ireland. Similar concerns were raised by Ms Hedley, who noted that those at risk of being excluded from an online consultation on clock changes would also be among the most affected by their abolition—for example, people living in the northern parts of the UK.

125. According to Dr Rolfe, opinion polls would offer a “much better” alternative to open consultations, especially if conducted on a “sample of the public” randomly selected from a panel. She argued that panels had the advantage of comprising “thousands of people” who had volunteered “to answer questions...
on a particular issue”, and therefore did “not have a vested interest”. As in open consultations, however, participants of panels were “not necessarily informed about the issue” and might not consider its “wider implications”.

126. To avoid the risk of a “knee-jerk response” based on uninformed preferences, Dr Rolfe proposed a third way: citizens’ assemblies where representative samples of the population are “presented with evidence from experts” to consider, before coming to an informed view. She saw this as “a much better way of coming to grips with” the issues.

127. The format of questioning can also have a considerable influence on the outcomes of consultation. Dr Hayward told us that the Irish government’s opinion poll, which she called “carefully conducted”, asked respondents “whether they would be willing to see two time zones on the island of Ireland”; 82% opposed the idea. By contrast, she and Mr Rosher noted that, in the Irish government’s public survey, participants were asked for their views on the potential for different time zones through an open-ended question, and 67% of respondents did not report any impacts. They suggested that the method chosen meant that the latter figure could “only be considered indicative rather than conclusive”.

128. The Centre for Cross Border Studies suggested that any consultation “should be targeted at relevant representative business and civil society bodies, as well as major public service providers”.

The timing of consultation

129. Witnesses expressed different views on the most appropriate timing for consultation. Dr Rolfe highlighted the risk that, if a consultation were held imminently, its results could be “clouded” by tensions around Brexit. Any sample survey conducted now would need to select participants not only according to their views on clock changes, but also “on the basis of leave or remain”, which would make the process “much more muddied”. She suggested instead that, in the shorter term, the Government could initiate a “public information campaign” to raise awareness and set up the consultation process, which would take “a matter of months”. In their joint submission, Dr Hayward and Mr Rosher also observed that the “lack of urgency around the proposal” allowed the Government “time to plan and consult”.

130. On the other hand, Mr Cleppe of Open Europe argued that, if the proposal progressed more swiftly than expected, the lack of polling evidence would make it far more difficult for the Government to decide. He considered it preferable to “have some evidence and data ready to present”.

The Government’s position

131. The Government stated that it “would not make changes to the current daylight saving arrangements without a full public consultation”. Since, however, the Government did not intend to implement the Commission’s

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152 Q 8 (Dr Heather Rolfe)
153 Ibid.
154 Q 8 (Dr Katy Hayward)
155 Written evidence from Dr Katy Hayward and Ben Rosher (SCT0027)
156 Written evidence from the Centre for Cross Border Studies (SCT0010)
157 Q 4 (Dr Heather Rolfe)
158 Written evidence from Dr Katy Hayward and Ben Rosher (SCT0027)
159 Q 4 (Pieter Cleppe)
proposal, it also had “no plans to launch a consultation on this matter”. 160 The Minister made the further point that the Government had “a duty … to make sure that we do not concern people about something that may never happen”,161 She indicated that, once it was clear “when [the proposal] was to be made law”, the Government would “need to go away and look” at the possibility of a public consultation.162

132. **Should the EU pass legislation discontinuing seasonal changes of time, the Government would be faced with two levels of decision making: whether the UK should also abandon the biannual clock change, in line with its EU neighbours; and if so, which permanent time zone it should adopt. At present, the Government has little evidence of the views of the public on either issue.**

133. **We accept that there is no urgency for the Government to conduct a full public consultation at this stage. But there remains a possibility that the proposal will resume progress in the Council and ultimately be agreed, and it would therefore be prudent for the Government to initiate consideration of how a future consultation exercise might be designed. In so doing, it should take account of the lessons that can be learned from previous EU and national consultation exercises, as well as of the specific suggestions made by our witnesses, such as the use of citizens’ assemblies or sample surveys.**

**Devolution and regional considerations**

134. The need for the devolved administrations to be involved in any future decision on the UK’s time arrangements was undisputed by witnesses. The Centre for Cross Border Studies argued that the devolved administrations should not only contribute to “the preparation of any UK Government consultation”, but also be “kept closely informed of any proposed UK Government policies”. It concluded that any decision should reflect “the maximum level of agreement”.163 The Scottish Government asked that the Government commit to not considering any changes to clock-change arrangements “without the specific approval and support of all of the devolved administrations”.164

135. Dr Hayward told us that the Joint Ministerial Committee would have the “means” to “co-ordinate input from the devolved nations … and respond to what is coming from them”.165 Mr Edelsten, on the other hand, suggested “a working party”.166 Dr Rolfe indicated that, if the Government were to use a citizens’ assembly process, assemblies should be established “in different parts of the UK, obviously including Scotland”.167

136. Witnesses also highlighted the importance of the English regions. According to Mr Edelsten, “the requirements and priorities from the north east, north west, south east and south west” of England were “likely to be quite...
different”. The Centre for Cross Border Studies recommended that regional bodies be involved in the design of any future consultation, as “a cooperative approach” was “more likely to include questions attuned to the different regions’ particular contexts”.

137. The Minister assured us that the Government was “engaging with all the devolved Administrations to understand the impact [of the proposal] in their areas”. In particular, it was “working and communicating” with the Scottish Government “on both a formal and informal basis”.

**Northern Ireland**

138. Witnesses drew attention to the specific challenges associated with consultation in Northern Ireland while the devolved institutions were suspended. The Centre for Cross Border Studies noted that it would be difficult for the Government to lead on consultation in Northern Ireland, given that time was a devolved matter. It proposed instead that the Government “should support the creation of a mechanism or employ an existing body to undertake consultation”. As noted in paragraph 81, Northern Ireland devolved institutions have been restored since we took evidence for this inquiry.

139. Commenting on the design of any future consultation, the Centre for Cross Border Studies argued that “questions should be framed in order to offer the appropriate weight” to the unique implications of abolishing clock changes for Northern Ireland. Dr Hayward noted that the inclusion of a question on the possibility of two time zones on the island of Ireland meant respondents to the Irish government’s opinion poll “completely changed their mind” on the desirability of discontinuing clock changes.

140. The Minister told us: “While we may not be undertaking formal consultation at this point, that does not mean that we are not engaging, listening and talking to people [in Northern Ireland]—mainly listening.”

141. The implications of the proposal to discontinue seasonal changes of time and the considerations involved in choosing a permanent time zone vary significantly across different parts of the UK. It is essential that the Government closely engages with the devolved administrations and regional bodies, including on the design and conduct of any consultation.

142. We welcome the Government’s informal engagement with stakeholders in Northern Ireland to understand their specific concerns. We encourage it to continue this engagement. We note, however, that the Irish government’s comprehensive consultation exercise offered Northern Irish stakeholders an opportunity to articulate their views formally.

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168 Written evidence from Duncan Edelsten ([SCT0001](#))
169 Written evidence from the Centre for Cross Border Studies ([SCT0010](#))
170 Q 21 (Kelly Tolhurst MP)
171 Written evidence from the Centre for Cross Border Studies ([SCT0010](#))
172 Written evidence from the Centre for Cross Border Studies ([SCT0010](#))
173 Q 8 (Dr Katy Hayward)
174 Q 26 (Kelly Tolhurst MP)
Stakeholder engagement

143. Appearing before us on 17 October 2019, Mr Ireland, Mr Lloyd and Dr Andrews told us that their organisations had had no formal engagement with the Government or regulators on the proposal’s implications for the UK. Mr Ireland signalled that airlines “would be very keen to feed into” any future assessment of the proposal.175

144. SONI Ltd, the electricity System Operator for Northern Ireland, stated that consultation with the SEM and market operators in the all-island energy market “would be beneficial”. It recommended that this should follow “existing regulatory channels”. In particular, the SEM Committee, the decision-making authority for the SEM, “should advise on any input to the Government’s approach”.176

145. The Minister confirmed that the Government was “not carrying out formal stakeholder engagement” given its position against abolishing clock changes in the UK. Asked how the Government had reached such a position without consulting with stakeholders, the Minister reiterated that “without a full impact assessment” there was no evidence to support the need for a change to time arrangements.177

146. We reiterate our view, set out in our Subsidiarity Assessment report of October 2018, that the issue of clock changes does not warrant action at EU level. Nevertheless, we have examined the European Commission’s proposal to discontinue seasonal changes of time closely, and our inquiry has demonstrated that any such decision at EU level would have implications for the UK, notwithstanding UK withdrawal from the EU. The nature and significance of such implications is not, however, well-understood—not least by the Government.

147. We therefore urge the Government, in considering the options for a possible future impact assessment and consultation with stakeholders, to undertake the following preparatory work:

(a) To review the research landscape, including any research carried out where non-alignment on clock changes exists, either within or between countries, and develop an evidence-based approach to the broader question of whether the UK should retain seasonal changes of time; and

(b) To carry out further work to identify the possible implications of a change to our time arrangements for business, nationally and internationally, working with the devolved authorities to better map and understand distinct regional issues.

175 Q 18 (Philip Ireland)
176 Written evidence from SONI Ltd (SCT0013)
177 Q 22 (Kelly Tolhurst MP)
SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

1. In the UK, seasonal changes of time facilitate lighter evenings for over half the year and reduce morning darkness in the winter months. The latter effect is most significant in northern parts of the UK. We received no compelling evidence to suggest that the current system of seasonal changes does not work well for the UK. We do, however, note the lack of both contemporary research and public consultation on this issue. (Paragraph 36)

2. EU Member States have a range of views on the Commission's proposal to discontinue seasonal changes of time, but clock changes are a subject of public concern in certain EU Member States, such as Finland and Germany. In recent years, the Commission has come under increased pressure from some of these countries and the European Parliament to reconsider EU summer-time arrangements. Its proposal to discontinue clock changes appears to be a response to that pressure. (Paragraph 45)

3. One of the drivers behind the Commission’s proposal to discontinue seasonal changes of time was an EU-wide consultation that received 4.6 million responses, 84% of which were in favour of abolishing the clock change practice. We reiterate the conclusion in our 2018 Reasoned Opinion that this response rate, while extraordinary for a Commission consultation, accounts for less than 1% of the EU-28 population, and 70% of those responses came from a single Member State, Germany. (Paragraph 46)

4. Although there is significant strength of public feeling in favour of abolishing seasonal changes of time, there is little evidence that doing so would lead to a material improvement over the status quo. In bringing forward its proposal to abolish clock changes, the Commission could not produce any conclusive evidence that the practice has material adverse repercussions on citizens or specific sectors. We note that it assessed the evidence on the health implications of seasonal changes of time, which had been highlighted as a concern, for example, in Finland’s citizens’ initiative and the European Parliament’s resolution, as “inconclusive”. (Paragraph 47)

5. In making its initial proposal, the Commission did not produce a full, detailed impact assessment. While public feeling is strong in some Member States, we believe the Commission should carry out a full impact assessment so that Member States can consider the proposal in the light of all the relevant evidence. (Paragraph 48)

6. Across both EU and non-EU countries, national and industry responses to the Commission’s proposal highlight the importance of coordination and minimising barriers to trade when it comes to time arrangements. (Paragraph 58)

7. While the complexity of adapting to an end to seasonal changes of time, and the time needed to prepare for such a change, vary between sectors, it seems that at least 18 months’ notice will be required for some industries, such as aviation, to adapt effectively. This should be accounted for in any timetable if this proposal proceeds. (Paragraph 59)

8. We heard general concern that variations in the time differences between the UK and its EU neighbours might add complexity for UK businesses trading with the EU. Evidence on this point was, however, far from detailed or conclusive. (Paragraph 75)
9. We are surprised that the available evidence regarding the consequences of non-alignment is relatively scant. Further research is needed into the general effects of clock changes, as well as the specific impacts for people and businesses of non-alignment of seasonal changes of time, for example as experienced in Australia and North America. (Paragraph 76)

10. From the evidence we heard, it was clear that non-alignment could lead to an increase in the time differences between the UK and its EU trading partners, reducing the number of common operating hours for businesses. Academic studies, and anecdotal evidence from Turkey and the Australian State of Queensland, suggest that this could pose an obstacle to trade in some sectors. Moreover, any change to the time differences between the UK and EU could alter the economic benefits of gas and electricity interconnectors. (Paragraph 77)

11. Considerably more evidence is also required to understand the implications of the Government’s current plans to retain clock changes even if the EU abolishes them. A starting point could be provided by evidence from the pre-1996 period, when the timing of the autumn clock change was not fully harmonised across the European Economic Community. (Paragraph 78)

12. We received substantive evidence that a time border between Ireland and Northern Ireland would have wide-ranging practical repercussions for individuals and businesses. A time difference for only some of the year, in a scenario where one part of the island of Ireland retains seasonal changes of time, would add greater complexity. (Paragraph 92)

13. If the EU were to discontinue seasonal changes of time but the UK decided to retain them, a future Northern Ireland Executive would have to choose between having a one-hour time difference for part of the year either with the Republic of Ireland or with the rest of the UK. (Paragraph 96)

14. Regions along the Ireland-Northern Ireland border share deep economic and social ties. Supply chains are closely integrated. It is normal to work or rely on public services, such as hospital and schools, on the other side of the border. There is no question that a time border would have enormous practical implications for firms and citizens in Northern Ireland, disrupting well-established ways of doing business and organising daily life. (Paragraph 97)

15. We note that the Government has recently negotiated a Withdrawal Agreement with the EU that ties Northern Ireland closely to the rules of the EU’s Single Market. In evidence, the Minister repeatedly emphasised Northern Ireland’s autonomy to set its own time arrangements in the future. However, were this proposal to become EU law under its current single-market legal basis, Northern Ireland may be obliged under the terms of the Withdrawal Agreement and the Protocol on Ireland/Northern Ireland to align with the EU and thus institute a time border with Great Britain. We suggest that the Government should give urgent further consideration to the impact that the Withdrawal Agreement and its Protocol on Ireland/Northern Ireland will have on the ability of Northern Ireland to make its own arrangements in future. (Paragraph 98)

16. The implications of a time border between Northern Ireland and Great Britain have attracted less attention and are therefore not well-understood, but in addressing the question of the ability of Northern Ireland to make its own arrangements in the future, we also ask the Government to assess
the likely economic impact on Northern Ireland/GB trade of different time zones within the UK as a result of the obligations set out in the Withdrawal Agreement. (Paragraph 99)

17. The abolition of seasonal changes of time in the UK in any circumstances would require adjustments in a range of sectors, from transport to energy and software development. Such adjustments would bring some transition costs, which could be burdensome for industries where scheduling, especially internationally, is of concern, such as aviation. We received, however, no estimate of the potential size of these transition costs for any industry, or for the economy as a whole. (Paragraph 107)

18. Our short inquiry has highlighted the diversity of views on what time arrangements would best serve the UK, and the difficulty of choosing a permanent time zone, if the UK were to do so. (Paragraph 117)

19. The benefits and drawbacks of permanent winter- or summer-time are likely to vary across sectors and regions and are not easily comparable or quantifiable. We recommend that any assessment of the two options should focus, as much as possible, on areas where it might be possible to collect hard evidence—for example, the costs to the aviation sector. (Paragraph 118)

20. Road safety is a conspicuous example of how, even within one sector, there are conflicting views on the relative benefits of permanent winter- or summer-time. We note that some of the evidence cited by witnesses was several decades old and difficult to use to draw conclusions about seasonal changes of time given other confounding factors, such as the introduction of speed limits. We note also that, at least in the evidence we received, it was not wholly clear how “accidents” were being defined in statistics regarding road safety and changes of time. (Paragraph 119)

21. We recommend that the Government look widely to all existing sources of evidence, seeking in particular studies relating to countries in a similar geographical position as the UK, including studies in the Nordic countries, and compile clear figures relating to road safety in the periods after the clock changes occur, to help identify the right course of action if clock changes are to be abolished. (Paragraph 120)

22. Should the EU pass legislation discontinuing seasonal changes of time, the Government would be faced with two levels of decision making: whether the UK should also abandon the biannual clock change, in line with its EU neighbours; and if so, which permanent time zone it should adopt. At present, the Government has little evidence of the views of the public on either issue. (Paragraph 132)

23. We accept that there is no urgency for the Government to conduct a full public consultation at this stage. But there remains a possibility that the proposal will resume progress in the Council and ultimately be agreed, and it would therefore be prudent for the Government to initiate consideration of how a future consultation exercise might be designed. In so doing, it should take account of the lessons that can be learned from previous EU and national consultation exercises, as well as of the specific suggestions made by our witnesses, such as the use of citizens’ assemblies or sample surveys. (Paragraph 133)
24. The implications of the proposal to discontinue seasonal changes of time and the considerations involved in choosing a permanent time zone vary significantly across different parts of the UK. It is essential that the Government closely engages with the devolved administrations and regional bodies, including on the design and conduct of any consultation. (Paragraph 141)

25. We welcome the Government’s informal engagement with stakeholders in Northern Ireland to understand their specific concerns. We encourage it to continue this engagement. We note, however, that the Irish government’s comprehensive consultation exercise offered Northern Irish stakeholders an opportunity to articulate their views formally. (Paragraph 142)

26. We reiterate our view, set out in our Subsidiarity Assessment report of October 2018, that the issue of clock changes does not warrant action at EU level. Nevertheless, we have examined the European Commission’s proposal to discontinue seasonal changes of time closely, and our inquiry has demonstrated that any such decision at EU level would have implications for the UK, notwithstanding UK withdrawal from the EU. The nature and significance of such implications is not, however, well-understood—not least by the Government. (Paragraph 146)

27. We therefore urge the Government, in considering the options for a possible future impact assessment and consultation with stakeholders, to undertake the following preparatory work: (Paragraph 147)

(a) To review the research landscape, including any research carried out where non-alignment on clock changes exists, either within or between countries, and develop an evidence-based approach to the broader question of whether the UK should retain seasonal changes of time; and (Paragraph 147)

(b) To carry out further work to identify the possible implications of a change to our time arrangements for business, nationally and internationally, working with the devolved authorities to better map and understand distinct regional issues. (Paragraph 147)
APPENDIX 1: LIST OF MEMBERS AND DECLARATIONS OF INTEREST

Members

Lord Berkeley
Lord Carter of Coles
Baroness Donaghy (Chairman)
Baroness Kramer
Lord Lamont of Lerwick
Lord Lansley
Lord Lilley
Lord Mountevans
Baroness Prashar
Lord Robathan
Lord Russell of Liverpool
Lord Shipley
Lord Vallance of Tummel
Lord Wigley

Declarations of interest

Lord Berkeley
No relevant interests
Lord Carter of Coles
No relevant interests
Baroness Donaghy (Chairman)
No relevant interests
Baroness Kramer
No relevant interests
Lord Lamont of Lerwick
Adviser, Stannope Capital LLP
Director, Devon European Opportunities Fund
Adviser, Official Monetary and Financial Institutions Forum
Lord Lansley
Director and working with Low Associates Ltd which has clients that work in Brussels
Lord Lilley
Small agricultural land holding with sheep in France
Lord Mountevans
No relevant interests
Baroness Prashar
No relevant interests
Lord Robathan
No relevant interests
Lord Russell of Liverpool
No relevant interests
Lord Shipley
No relevant interests
Lord Vallance of Tummel
No relevant interests
Lord Wigley
No relevant interests
The following Members of the European Union Select Committee attended the meeting at which the report was approved:

Baroness Brown of Cambridge  
Lord Cavendish of Furness  
Baroness Couttie  
Baroness Donaghy  
Lord Faulkner of Worcester  
Lord Jay of Ewelme  
Lord Kerr of Kinlochard  
Earl of Kinnoull (Chairman)  
Lord Lamont of Lerwick  
Lord Morris of Aberavon  
Baroness Neville-Rolfe  
Lord Oates  
Lord Sharkey  
Lord Teverson  
Baroness Verma  
Lord Wood of Anfield

During the consideration of the report the following Members declared an interest:

Lord Cavendish of Furness  
*Director, Burlington Slate Limited*  
*Shareholder, Holker Holdings Limited*  
*Shareholder, Cartmel Steeplechases (Holker) Limited*  
*Shareholder, Holker Estates Co Limited*  
*Shareholder, Holker Homes Limited*  
*Shareholder, Burlington Slate Limited*  
*Roose and Walney Sand and Gravel Company Limited (The) (Dormant)*  
*Holker Estates Co Limited*

Baroness Couttie  
*Non-Executive Director, Mitie*  
*Commissioner, Guernsey Financial Services Commission*

Lord Faulkner of Worcester  
*Former President and current Vice-President, The Royal Society for the Prevention of Accidents (ROSPA)*  
*Chairman, Great Western Railway Advisory Board*

Lord Kerr of Kinlochard  
*Chairman, Centre for European Reform*  
*Deputy Chairman, Scottish Power PLC*  
*Member, Scottish Government’s advisory Standing Council on Europe*

Baroness Neville-Rolfe  
*Chair, Assured Ford Standards Ltd (Red Tractor)*

Lord Oates  
*Director, Centre for Countering Digital Hate*  
*Chairman, Advisory Board, Weber Shandwick UK*  
*Non-Executive Director, NHSBT*
APPENDIX 2: LIST OF WITNESSES

Evidence is published online at https://www.parliament.uk/eu-internal-market-subcommittee/discontinuing-seasonal-changes-time for inspection at the Parliamentary Archives (020 7219 3074).

Evidence received by the Committee is listed below in chronological order of oral evidence session and in alphabetical order. Those witnesses marked with a ** gave both oral and written evidence. Those marked with * gave oral evidence and did not submit any written evidence. All other witnesses submitted written evidence only.

Oral evidence in chronological order

* Pieter Cleppe, Head of Brussels Office, Open Europe QQ 1–9
** Dr Katy Hayward, Reader, Queen’s University Belfast, and Senior Fellow, The UK in a Changing Europe QQ 1–9
* Dr Heather Rolfe, Head of Research, Demos
** Dr Justin Andrews, Head of Design Authority, ELEXON QQ 10–18
** Philip Ireland, Manager, International Air Transport Association
** Nick Lloyd, Head of Road Safety, Royal Society for the Prevention of Accidents QQ 10–18
** Laura Robinson, Deputy Director, Labour Markets Directive, Department for Business, Energy & Industrial Strategy QQ 19–28
** Kelly Tolhurst MP, Minister for Small Business, Consumers and Corporate Responsibility, Department for Business, Energy & Industrial Strategy

Alphabetical list of all witnesses

* Airlines for Europe SCT0016
** Dr Justin Andrews, Head of Design Authority, ELEXON (QQ 10–18) SCT0014
Centre for Cross Border Studies SCT0010

* Pieter Cleppe, Head of Brussels Office, Open Europe (QQ 1–9) SCT0015
UK Trade and Policy Observatory SCT0001
Duncan Edelsten SCT0012
Freight Transport Association SCT0027

* Dr Katy Hayward, Reader, Queen’s University Belfast, and Senior Fellow, The UK in a Changing Europe (QQ 1–9) SCT0009
Susan Hedley
Internet Assigned Numbers Authority
Philip Ireland, Manager, International Air Transport Association (QQ 10–18)

Nick Lloyd, Head of Road Safety, Royal Society for the Prevention of Accidents (QQ 10–18)
Maltese Government
Ministry of Transport and Communications of Finland
National Farmers’ Union
National Farmers’ Union, Scotland
National Physical Laboratory
Northern Ireland Chamber of Commerce and Industry
Ofgem
Chris Pearce
Dr David Prerau
Laura Robinson, Deputy Director, Labour Markets Directive, Department for Business, Energy & Industrial Strategy (QQ 19–28)
Dr Heather Rolfe, Head of Research, Demos (QQ 1–9)
Royal Museums of Greenwich
Royal Norwegian Ministry of Trade, Industry and Fisheries
Scottish Government
Jonathan Skeet
SONI Ltd
Kelly Tolhurst MP, Minister for Small Business, Consumers and Corporate Responsibility, Department for Business, Energy & Industrial Strategy (QQ 19–28)
Turkish Industry & Business Association
Ulster Farmers’ Union
APPENDIX 3: CALL FOR EVIDENCE

The House of Lords EU Internal Market Sub-Committee, chaired by Baroness Donaghy, has launched an inquiry into the European Commission’s proposal to end seasonal changes of time in the EU, and what this proposal will mean for the UK in the context of Brexit.

Background

EU summer-time legislation requires Member States to begin their summer-time arrangements on the last Sunday of March and end them on the last Sunday of October. On 13 September 2018, the European Commission published a proposal to replace the obligation to apply seasonal changes of time with an obligation to discontinue this practice, and observe winter- or summer-time throughout the year. The choice of permanent winter- or summer-time will be at the discretion of each Member State.

On 22 October 2018, the Committee published a reasoned opinion concluding that the proposal does not comply with the principle of subsidiarity.

Inquiry focus

If the Directive is adopted and it has a transposition deadline that falls within the period in which the UK is still a Member State or in a transition period, the UK will be required to end seasonal changes of time and choose between applying permanent winter- or summer-time.

If the Directive is adopted and it has a transposition deadline after exit day, and the UK has no obligation to continue applying EU law, the UK will be faced with the choice of maintaining seasonal changes of time or abolishing them in line with its EU neighbours.

The proposal has significant implications for the island of Ireland: while time is a reserved matter in respect of Scotland and Wales, there is no equivalent reservation or exception for Northern Ireland. Northern Ireland (assuming the devolved institutions have been re-established) may therefore need to choose between aligning its time arrangements with the Republic of Ireland or with the rest of the UK.

The inquiry will examine what preparations the Government should make for the possibility that the Directive is adopted, and what factors should inform its approach. The committee does not intend to evaluate the relative merits of permanent winter- or summer-time.

Witness diversity

Diversity comes in many forms, and hearing a range of different perspectives means that Committees are better informed and can more effectively scrutinise public policy and legislation. Committees can undertake their role most effectively when they hear from a wide range of individuals, sectors or groups in society affected by a particular policy or piece of legislation. We encourage anyone with experience or expertise of an issue under investigation by a select committee to share their views with the committee, with the full knowledge that their views have value and are welcome.
## APPENDIX 4: GLOSSARY

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A4E</td>
<td>Airlines for Europe</td>
<td></td>
</tr>
<tr>
<td>BEIS</td>
<td>Department for Business, Energy &amp; Industrial Strategy</td>
<td></td>
</tr>
<tr>
<td>BSC</td>
<td>Balancing and Settlement Code (BSC)</td>
<td>The BSC is an industry code setting out governance arrangements for the electricity market in Great Britain</td>
</tr>
<tr>
<td>BST</td>
<td>British Summer Time</td>
<td></td>
</tr>
<tr>
<td>DST</td>
<td>Daylight Saving Time</td>
<td></td>
</tr>
<tr>
<td>ECC</td>
<td>European Economic Community</td>
<td></td>
</tr>
<tr>
<td>EP</td>
<td>European Parliament</td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
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</tr>
<tr>
<td>FTA</td>
<td>Freight Transport Association</td>
<td></td>
</tr>
<tr>
<td>GMT</td>
<td>Greenwich Mean Time</td>
<td></td>
</tr>
<tr>
<td>IANA</td>
<td>Internet Assigned Number Authority</td>
<td></td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
<td></td>
</tr>
<tr>
<td>NFU</td>
<td>National Farmers’ Union</td>
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</tr>
<tr>
<td>NFUS</td>
<td>National Farmers’ Union Scotland</td>
<td></td>
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<tr>
<td>NISRA</td>
<td>Northern Ireland Statistics and Research Agency</td>
<td></td>
</tr>
<tr>
<td>NPL</td>
<td>National Physical Laboratory</td>
<td></td>
</tr>
<tr>
<td>ONS</td>
<td>Office for National Statistics</td>
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<tr>
<td>RoSPA</td>
<td>Royal Society for the Prevention of Accidents</td>
<td></td>
</tr>
<tr>
<td>SEM</td>
<td>Single Electricity Market</td>
<td></td>
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<tr>
<td>TFEU</td>
<td>Treaty on the Functioning of the European Union</td>
<td></td>
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<tr>
<td>TÜSİAD</td>
<td>Turkish Industry &amp; Business Association</td>
<td></td>
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<tr>
<td>UFU</td>
<td>Ulster Farmers’ Union</td>
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<tr>
<td>UKTPO</td>
<td>UK Trade Policy Observatory</td>
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</tr>
<tr>
<td>UTC</td>
<td>Coordinated Universal Time</td>
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