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Article (Accepted Version)

Lockwood, Matthew (2021) Routes to credible climate commitment: the UK and Denmark compared. *Climate Policy*, 21 (9). pp. 1234-1247. ISSN 1469-3062

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# Routes to credible climate commitment: The UK and Denmark compared

Version accepted by *Climate Policy* 20 December 2020

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**Abstract:** Credible commitment is central to regimes for climate mitigation policy.. In the climate policy literature, it is widely argued that the solution to the credible commitment problem is legislation and delegation of goal-setting to a technical body insulated from political incentives, and the UK's Committee on Climate Change is in part modelled on this approach. However, drawing on the comparative politics literature, this paper argues that the focus on legislation and delegation as the solution to the credible commitment problem is too narrow. Seen within the context of comparative political institutions, it is a response that fits the political logic in countries with majoritarian electoral systems. By contrast, in countries with electoral systems based on proportional representation (PR), while legislation plays a role, an important element in the creation of credible commitment comes in the form of negotiated long-term agreements between political parties. This contrast is explored through a comparison between the Climate Change Act and associated Committee on Climate Change in the UK on the one hand, and a series of Energy and Climate Agreements in Denmark over the 2010s. Both approaches appear to have worked to date. However, while negotiated long-term agreements typically have an internal process for managing conflicts that inevitably arise after the respective mechanisms have been put in place, disputes arising following legislation and delegation must be resolved within the more informal processes of intra-party politics. Mechanisms of accountability also differ between the two approaches.

## 1. Introduction

A central issue for climate policy in market economies is how to ensure that the huge investment needed in low-carbon technologies can be secured. It is widely recognized that a key condition for low-cost investment is a stable, predictable policy environment that minimizes risk (IEA 2007). What is sometimes termed 'policy durability' (Jordan and Matt 2014) in turn depends on a long-term *political* commitment to decarbonisation. However, to be effective, such commitment must be also *credible*, i.e. investors must be convinced that governments will not reverse policy in future and strand their investments (e.g. Bosetti and Victor 2011).

A common view in the literature is that the way to establish credible commitment to decarbonisation is through legislation and the delegation of decisions on targets to a

politically insulated technocratic body (e.g. Lazarus 2009, Brunner et al 2012, Grosjean et al 2016). This approach is exemplified by the 2008 UK Climate Change Act<sup>1</sup> with its Committee on Climate Change, which has been widely held up as an example for other countries (Townshend et al 2013; Averchenkova et al 2019; Eskander et al 2020).

In this context, this paper makes three arguments. First, that an exclusive focus on legislation and delegation as *the* ‘commitment device’ risks overlooking other possibilities. Contrary to much of the literature, there is more than one way to achieve credible commitment in climate policy. Second, that democracies are likely to take different routes to addressing the problem depending on the characteristics of their political institutions. Legislation and delegation fit the political logic in countries with majoritarian electoral systems. By contrast, in countries with electoral systems based on proportional representation (PR), while legislation has a role, a more important element in the creation of commitment can come through long-term agreements negotiated directly between political parties.

Third, both approaches to credible commitment can provide reasonably successful mechanisms to address the time inconsistency problem, and can function to prevent backsliding under political pressure. However, it remains to be seen how these routes perform as more ambition and greater engagement of citizens is required.

To illustrate and explore these arguments, the article examines two cases. One, representing the ‘legislation and delegation’ route, is the UK in which the 2008 Climate Change Act plays the central role. The other, representing the ‘political agreement and legislation’ route, focuses on Denmark, where there were a number of negotiated agreements between parties on energy and climate over the 2010s. The article examines why different routes were followed, how the commitment mechanisms were set up and what the outcomes have been in the two cases.

The paper proceeds as follows. In Section 2, I briefly consider how credible commitment has been defined, and its different functions. Section 3 covers the approach, methods and sources used. In section 4, I describe the development and workings of the two approaches adopted in the UK and Denmark. Section 5 presents the argument that they arise from institutional systems with differing political logics. In Section 6, I then make a brief comparison of their performance and evaluate how they have operated in episodes of challenge, and what this reveals about their respective strengths and weaknesses. Section 7 concludes.

## 2. Defining credible commitment

The underlying dynamic that gives rise to the credible commitment problem is that climate change is a widespread concern but also one of relatively low salience for most voters much of the time (Crawley et al 2020), whilst climate policy in many instances imposes short-term upfront costs on consumers and tax payers (Lazarus 2009). Climate policy shares this structure with some other public policy problems (Jacobs 2011).

As a result, while many governments want to commit to climate policies, there may also be incentives for them or future governments to weaken or abandon those policies if and when short-term policy costs are perceived to create the risk of electoral unpopularity. The resulting problem of ‘time inconsistency’ in incentives for adhering to a policy means that the stated commitment of the government may not be credible, especially to investors. The original analysis applied to monetary policy (Kydlan and Prescott 1977), but has also been identified within environmental economics (e.g. Marsiliani and Renström 2000). As a solution to the time inconsistency problem Kydlan and Prescott’s (1977) proposed what have become known as ‘commitment devices’, defined as: ‘institutional arrangements that make it a difficult and time-consuming process to change the policy rules in all but emergency situations’ Kydlan and Prescott (1977: 487).

Credible commitment can be seen as playing several functions. One is binding governments to decisions already made, to avoid backsliding and the creation of stranded assets. A second is forward looking, i.e. binding governments to the implementation of policies to reach previously defined goals. These two functions are particularly important for investors.

A third function that has been proposed for credible commitment is the binding of decisions to a scientific basis. However, policy making always involves value judgements (Cairney et al 2016), for example on distributive outcomes, so this argument is less clear. In addition, there is a need for commitment devices to strike a balance between credible commitment and durability on the one hand, and the need for flexibility to adapt long-term goals on the other, in line with learning about climate damage and technology costs and options (Brunner et al 2012, Jordan and Matt 2014).

## 3. Methods and sources

To explore different routes to credible commitment, a comparative case study approach has been taken. The UK and Denmark were chosen as case studies because they are paradigmatic of the contrasts in political institutions associated with majoritarian and PR systems respectively. In Powell's (2001) study of 23 countries, Denmark had one of the least disproportionate relationships between votes and seats in legislative elections, while the UK had almost the most disproportionate (see also Lijphart 2012).<sup>2</sup> The UK was also an obvious candidate because of the iconic status of the 2008 Climate Change Act (CCA).

The analysis of the formation of the two routes and of their subsequent performance is based on: primary documentation, including legislation and political agreements in the UK and Denmark; media reports; secondary sources, and a number of interviews with participants in, and close observers of, the approaches to credible commitment in the two countries (Table A.1). Interviews in the UK span the period 2012 to 2020, while those in Denmark are from two visits in 2014 and 2018. Interviewees were chosen for their participation in, or knowledge of, the origins and operation of the respective commitment devices, and in the Danish case also for their knowledge of wider political institutions and dynamics. Interviews used a semi-structured schedule of questions, allowing follow ups where useful. The interviews were all held face-to-face and were recorded where possible.

## 4. Two routes to credible climate commitment

### 4.1 Legislation and delegation as a commitment device in the UK

In the mid-2000s, the idea of commitment to long-term goals for emissions reduction became important in the UK for two reasons (Lockwood 2013). One was a sharp upswing in the salience of climate change and calls for greater ambition and action. The other was the acknowledgement that the Labour government had 'failed to meet its own rather weak commitments' (Interview 9) on reducing greenhouse gas (GHG) emissions, and that a new approach was needed.

The ultimate response to this situation involved two elements: legislation and delegation. The New Labour government in power at this time had been increasingly interested in legislating policy goals and targets (Rutter and Knighton 2012). At the same time, an NGO-led campaign for a new Climate Change Bill was receiving significant support (Lorenzoni and

Benson 2014). In theory, legislation as a commitment device has the weakness that it can be repealed by future governments.<sup>3</sup> However, as Brunner et al (2012: 263) note:

‘Legislation...raises the discursive hurdle for policy change. Targets can no longer be silently dropped when they become inconvenient. Changing laws entails a visible (and perhaps politically costly) process if constituencies are not convinced of the legitimacy of the action.’

The idea of delegating decision making to a technocratic body, insulated from political pressures, as a solution to the time inconsistency problem came from the monetary policy literature, where independent central banks provided the model (Rogoff 1985, Blackburn and Christensen 1989). In the UK, the Bank of England was made independent in 1997 with the creation of the Monetary Policy Committee (MPC). As debates on the Climate Change Bill developed, this idea became increasingly influential. Helm et al (2003) put forward the case for delegation of climate policy to an independent body (an ‘energy agency’). Opposition parties came together in early 2006 to issue a statement calling for: ‘the establishment of a new, independent, authoritative body’ with a remit to set binding targets for emissions reduction, suggest policies and report to Parliament annually (Clayton et al 2006). The Conservative leader, David Cameron, made explicit comparisons with the MPC (e.g. Cameron 2007). In mid-2006, the government’s Energy Review (DTI 2006) proposed the establishment of a new Office of Climate Change (OCC), to monitor progress towards our carbon goals and ensure coherence of action across Government departments. The team developing the Climate Change Bill, led by environment secretary David Miliband, then proposed that the OCC could effectively become a secretariat for an independent ‘Carbon Policy Committee’, a key function of which would include giving clear long-term signals of intent with the aim of providing investors with credible commitment (Interview 9).

In the event, a strong version of delegation involving a committee setting carbon budgets was abandoned, ‘because it was pretty clear that it wouldn’t fly with the Treasury primarily...and the Department of Trade and Industry’ (Interview 9). The Treasury believed that the range of decisions involved in decarbonising the economy was too wide and too political to leave to a technocratic committee (Interview 1). Instead, while the Act contained a binding long-term emissions reduction target for 2050, it delegated only advisory powers to the accompanying Committee on Climate Change (CCC). The government would make the final decision and retain control over policy.

However, what is legally a relatively soft power (Interview 4) has had much greater effect through a set of accountability and reputational mechanisms (Averchenkova et al 2020). First, the CCC recommends a carbon budget to the government, according to a timetable set out under the Act. The Secretary of State must take the Committee's advice into account in setting a budget. If that advice is rejected, then he or she has to explain to Parliament why this is so. The government then puts the budget to Parliament in the form of a statutory instrument, and it is approved or rejected. To date, successive governments have accepted all five budgets recommended by the CCC, although there was considerable controversy over the Committee's recommendation for the fourth budget in 2011 (see below and Lockwood 2013).

The Act also specifies that a report laying out policies to enable the carbon budgets to be met must be laid before Parliament by the government 'as soon as is reasonably practicable' after the budget is set. There is no set format, but this report is supposed to include 'proposals and policies', explain how these affect different sectors of the economy and a timeline for their implementation. This step is important because high level budgets are quite removed from the details of policy consistency and coherence that are important for actors on the ground (Rogge and Dütschke 2018); in the words of Fankhauser et al 2018, the existence of the CCA in itself is not 'investible'. Instead, it is through driving more specific measures such as the Electricity Market Reform legislated in the 2013 Energy Act that it works as a commitment device in practice. However, there is also a fairly wide degree of flexibility in the relationship between carbon budgets and individual policies, meaning that stability in particular areas has not always been guaranteed.<sup>4</sup>

The CCC responds to the government's plan and is also required to provide an annual report on progress to Parliament. Finally, if the carbon budgets are not met, the Secretary of State must give an explanation to Parliament of why this is so and how the government will take remedial action.

#### 4.2 Political agreement and legislation as a commitment device in Denmark

From the 1980s onwards, Denmark was a leader in energy and carbon taxation, and investment in renewable energy. However, the 2000s saw considerable volatility in support for policies promoting wind power, linked to changes in government and the positions of

parties (Meyer 2007, Ryland 2010, Eikeland and Inderberg 2016). This experience of policy instability led to the view by the early 2010s that some form of longer-term framework for energy and climate policy was needed.

To create this framework, Danish governments have drawn on a long standing and widely used approach that does include legislation, but in which a prior role has been played by negotiated agreements between political parties. The ideal norm for such agreements is broad Parliamentary buy-in: ‘no party would ever dare to put through a major agreement...without including the opposition.’ (Interview 2). Over the 2010s there were a series of Energy Agreements (in 2012<sup>5</sup> and 2018<sup>6</sup>) and Climate Agreements (2014 and 2019<sup>7</sup>).

Negotiations on an Energy Agreement began in 2011 under a centre-right coalition government led by the Venstre party. Following the election of a Social Democrat-led centre-left coalition government in October 2011, the process was completed and a final agreement with more ambitious targets was reached in 2012. Described as a ‘political agreement’ (Danish Ministry of Energy, Climate and Buildings 2013), the document was backed by all parties except the relatively small Liberal Alliance, representing 171 out of 179 seats in the Parliament. The Agreement covered the period up to 2020 and contained not only a high-level target of a 34% reduction in emissions but also a range of specific measures on wind power, biomass and energy efficiency.<sup>8</sup> A legislative decree on renewable energy followed the Agreement in 2016.

In February 2014, in an attempt to bind future governments in anticipation of losing the 2015 election, the same government reached a political agreement on climate change with some opposition parties, including the Conservative Party (Ladrech and Little 2019). However, they failed to bring on board Venstre or the populist right Danish People’s Party (Carter et al 2014). This Climate Agreement included a more ambitious emissions reduction target for 2020 of 40%, and led to a Climate Change Act in June 2014, loosely modelled on the UK Act (Dyrhauge 2020). It established an equivalent of the CCC, the *Klimarådet*<sup>9</sup>, or Climate Council. However, this isomorphic equivalence was misleading, since the Council, while seen as technically sound and politically astute, had a heavily proscribed remit and little influence on policy, and the Act did not specify carbon budgets (Interviews 5 and 7). Dyrhauge (2020: 10) describes the 2014 Act as ‘symbolic’ and notes that climate goals up until the end of the decade were set through the Energy Agreements. The 2020 emissions reduction target was dropped by Venstre when they came to power in 2015.



The 2012 Energy Agreement contained a formal obligation for the parties to reach a replacement Agreement by 2018 which would cover the period to 2030.<sup>10</sup> However, even if this had not been the case there would still have been pressure for a new Agreement (Interview 6). By 2016, Venstre was heading a coalition government and led the negotiations, with considerable effort to ensure the inclusion of parties across the political spectrum especially the Social Democrats (Interview 8). The 2018 Agreement was ultimately signed by all parties in Parliament and again included not only a high-level target for renewable energy but also specific targets and measures, including budgetary allocations, for energy savings, wind energy and research.<sup>11</sup>

By this time, the salience of climate change in Denmark was rising sharply (Concito 2018), and there was ‘immense pressure’ (Interview 7) from civil society and the energy sector for a more ambitious long-term emissions reduction target. It was also increasingly realised that the transport and agricultural sectors, not covered by the Energy Agreement, would be a major challenge for decarbonisation (Interviews 6 and 8). In the autumn, the Venstre-led coalition government sought to reach a new climate change agreement. However, this process was not completed before the 2019 general election. The Social Democrats formed a new minority government supported by three other parties on the left through an agreement that specified further climate action, including a new 2030 emissions reduction target and specific measures on energy efficiency improvements, a broad electrification strategy, a ban on the sale of all new diesel and petrol cars from 2030 and cooperation with other countries on offshore wind (Farand 2019). The government then negotiated with the right-wing opposition parties to reach a new Climate Agreement in December 2019, with eight out of ten parties (including Venstre) representing 95% of seats in the Danish Parliament. This Agreement was the basis for a new Climate Change Act, with legally binding targets and an expanded advisory role for the Climate Council, which also requires annual voting in Parliament to approve the government’s policy proposals for meeting targets (Timperley 2020). Danish legislation has therefore come to look more like the UK’s CCA. However, this does not mean that the Agreement approach has been abandoned in favour of legislation and delegation, since legislation has been reached only through the Agreement process, and it is very likely that agreements will continue to be negotiated in future.

The Agreements are explicitly seen as playing a commitment function:

‘politically it is accepted that it doesn’t really work if we have four years’ shift in the direction and the priorities...and the [energy] sector requires huge investment in infrastructure...and if you don’t have a stable framework you will not make investors actually take these decisions.’ (Interview 6)

Both Climate and Energy Agreements are directly negotiated between political parties, in a process that lies outside of the Parliament. Business, labour and environmentalist organisations feed in through briefings, events and meetings with parties, but are not part of the formal negotiations (Interviews 5 and 6). With the exception of the 2014 Climate Agreement, the agreements have involved the vast majority of political parties in Denmark. The Agreements are not legal documents, and do not contain the specific details that are important for investors, but rather provide a framework for legislation:

‘there’s all the nitty-gritty parts afterwards, all the details on the exact dates, the exact conditions, and so on...when the Agreement is done, some of that detail will go into legislation’ (Interview 6)

However, the overall status of the Agreements, and many parts of the texts, are characterised as *forlig* (‘settlement’) elements, i.e. the outcome of a pact across party lines and time horizons, transcending general elections and giving contracting parties a veto right over any change and binding the hands of future governments.<sup>12</sup> *Forlig* is described by a senior government official as a ‘very strong political tool’ (Interview 6) and major defections would be seen as breaking Danish political norms and punished by voters (Interview 2). Responsibility for implementation of the Agreements lies with the parties collectively, but the government is expected to take the initiative in putting forward draft policies.

## 5. Locating the approaches within comparative political institutional contexts

In this section I argue that the difference in approaches to credible commitment to climate policy between the UK and Denmark is not random, but rather arises from a contrast in electoral systems and resulting political logics. At the heart of the contrast are two different visions of the democratic process (Powell 2001).

The majoritarian vision, or what Lijphart (2012) calls the ‘Westminster model’, is based on electoral systems with single member districts in which the party with the largest share of the vote wins the seat in the legislature. Such systems give disproportionate representation to a

small number of dominant political parties, in many cases just two.<sup>13</sup> The logic of representation here is that voters make a choice between two or three identifiable future governments. There is clarity of responsibility, since the government formed by the party with a majority of seats dominates policy making. There are few if any opportunities for opposition parties to have direct influence over policy making, so they will tend to concentrate on attacking the government in hope of winning over voters in the next election. As Lijphart (2012: 15) puts it: ‘By concentrating power in the hands of the majority, the Westminster model sets up a government-versus-opposition pattern that is competitive and adversarial.’

Under these circumstances, achieving credibility on long-term policy goals through a negotiated binding cross-party agreement is difficult, if not impossible. There are strong incentives for (both) major parties to defect, so that they can blame the other party for failure, and as they do not expect to have to work together in future in coalition governments.<sup>14</sup> Legislating goals, and delegating the setting of goals or even policy to a technocratic body outside of the political domain is therefore an attractive option.

A majority government would be able to take such a step by itself, but it could be argued that where legislation and delegation also has the backing of the opposition, the credibility of commitment is increased. Such an argument is often made for the UK CCA (e.g. Fankhauser et al 2018), which was passed in Parliament with virtually no opposition. However, this result should be seen in the context of Conservative leader David Cameron’s backing of climate policy as a strategy to ‘detoxify’ the Conservative party at a time of heightened public concern about climate change (Carter 2006, 2008). At the point of the CCA vote, there was therefore political competition *for* action on climate change (Carter and Jacobs 2014). But the vote overstated the depth of support within the Conservative party; even at the time the Climate Change Bill faced criticism from some backbench Conservative MPs (Lockwood 2013) and a survey of Conservative MPs in July 2008 found that one third were not convinced about man-made climate change (Carter 2010). Scepticism about the Act if anything strengthened subsequently (Carter 2015, Gillard 2016). However, regardless of the degree of consensus between political parties in 2008, the more important point is that a formal, binding cross-party agreement to help create credible commitment was not feasible, despite attempts to develop one (Clayton et al 2006).

In PR systems, with multi-member districts, the share of seats going to each party at elections is more directly proportional to their share of the vote. Far more parties will obtain seats in the legislature, meaning that voters have a larger range of effective party choices. Such systems tend to produce coalition and minority governments more frequently, so power is more dispersed, and there is less clarity of responsibility. However, in the proportional vision of democracy, this matters less than the fact that a wider range of points of view can be represented in the policy making process *after* elections take place, through bargaining between elected representatives ‘in a flexible and accommodative fashion’ (Powell 2001: 6). This can happen both through agreements negotiated between parties and the shaping of legislation by powerful parliamentary committees (Strøm 1990).

In these circumstances, seeking to achieve credible commitment to long-term climate and energy policy goals through negotiated agreements is much more feasible, indeed in line with prevailing institutions. These negotiated agreements do typically lead subsequently to legislation, often to pin down details, but much of the work of creating credible commitment happens through the agreements (in Denmark especially the *forlig* elements) rather than the laws. Achieving near-consensus is not necessarily an automatic process; negotiations on the 2018 Energy Agreement went on for several months and stalled at various stages (Interview 5). Nevertheless, there is an incentive to be a signatory to the Agreements because this is the only way of influencing future events through gaining veto player status.

Accountability and enforcement also work somewhat differently in the two approaches. Brunner et al (2012: 267) argue that commitment devices create forms of accountability to what they call ‘countervailing constituencies’ that are central to their enforcement. These features are indeed found in both of the two commitment devices considered here, but the nature of the countervailing constituencies is rather different.

In the case of the UK’s CCA, if the government does not follow the steps required in the Act or fails to meet the budgets, they might be challenged through judicial review,<sup>15</sup> but there is no meaningful penalty except a reputational one (Muinzer and Little 2020). Enforcement relies instead on the actions of organisations and individuals supportive of the CCA and the CCC in holding governments to account through public scrutiny. Posen (2010) makes a similar point in relation to monetary policy, i.e. that central banks are sometimes vulnerable to hostile governments since they cannot engage in political debate directly, but rather must rely on allies active within civil society.

In the case of the UK, not only is the use of CCC analysis and information by actors in civil society organisations, Members of Parliament and even officials in government an important channel for the influence of the CCC on policy making (Averchenkova et al 2020), but these actors also stand as a line of defence against the weakening of the CCA and the CCC (e.g. Allott 2012).<sup>16</sup> The legislation and delegation approach fits well within contexts where majoritarian election rules pertain, but in such contexts it is also the case that environmentalist parties (i.e. Green parties) are weak. As a result, the environmentalist constituency in the UK is represented particularly through environmental campaign and advocacy groups.

In the Danish approach, accountability still plays the central role in enforcement, but the key ‘countervailing constituency’ is somewhat different. The most immediate actors policing attempts by governments (or specific parties leading governments) to defect from agreements are other parties to the agreement, who each have a veto power over changes. In countries with PR, where such agreements are feasible, Green parties usually have seats in Parliament and so can represent the environmentalist constituency directly. Standing behind this formal arrangement, ‘public scrutiny’ (Brunner et al 2012) does still play a role, in the sense that reaching consensus and cooperation in political life are seen as fundamental values in Danish society more widely (Interviews 2 and 8).

A final point to note is that despite differences, both approaches have a degree of adaptability built in to balance commitment against new information. For the CCA, this flexibility is a core feature of the carbon budget process, since budgets are set over time and specific policies can easily be changed. The 2050 target was also changed in 2019 to net zero emissions. In the Danish case, adaptability is built into the Energy Agreements through the requirement to negotiate a new Agreement every six years, and the allocation of future budgets without specifying how they are to be spent. The 2019 Climate Agreement also requires annual Parliamentary approval of the government’s programme for meeting targets.

If PR in Denmark facilitates agreements as a route to credible commitment, then we might expect to see these in other countries with PR, especially where such other countries are climate leaders. Table 1 gives a indication of whether there are extra-legal agreements in the ten countries with the lowest disproportionality scores in Lijphart (2012).<sup>17</sup> Not all of these countries have such agreements but many do, supporting the argument that focusing exclusively on legislation and delegation as the route to credible commitment risks missing

other important elements. In some, notably the Netherlands, the route to commitment devices have also made use of possibilities created by the existence of corporatist institutions.

**Table 1**  
**Agreement processes in countries with PR**

<b>Country</b>	<b>Disproportionality index (Lijphart 2012)</b>	<b>Electoral system</b>	<b>Agreement processes</b>
Netherlands	1.21	List PR	2013 Energy Agreement for Sustainable Growth; 2019 Climate Accord
Denmark	1.71	List PR	Energy and Climate Agreements, 2012 to 2019
Sweden	2.04	List PR	2017 Climate Policy Framework agreed between all political parties except the nationalist populist Sweden Democrats, leading to Climate Act
Austria	2.51	List PR	None
Switzerland	2.55	List PR	2019 multi-party Federal Council adopts 2050 net zero target and strategy
Israel	2.60	List PR	None
Germany	2.67	PR-MMP	Climate Action Plan 2050, initiated and adopted by ‘grand coalition’ government, involving the federal Länder, municipalities and peak associations
Finland	2.96	List PR	2018 cross-party statement agreeing Finland’s contribution to reaching 1.5°C
Belgium	3.35	List PR	2018 Energy Pact negotiated between energy ministers from different governments at federal and regional levels
Italy	3.61	PR-MMP	None

Note: PR = proportional representation; MMP = mixed member proportional

## 6. Comparing the two approaches

How do the two approaches compare? In this section I briefly consider two aspects of performance: i) outcomes for Denmark and the UK in relation to targets for emissions reduction and renewable electricity generation, and ii) how have they managed political challenges once in place.

### 6.1 Outcomes

It is beyond the scope of this paper to provide a detailed analysis exploring causal links between commitment devices, investment and outcomes. However, a brief summary assessment suggests that both countries have met or come close to meeting their goals and targets for emissions reduction and expansion of renewable electricity, so in this sense the commitment devices can be said at least to have been functional to date.

The UK has comfortably met the first two carbon budgets, although it has benefitted from a degree of luck.<sup>18</sup> GHG emissions have fallen by almost 30% since 2008. In 2009, under the EU Renewables Directive, the UK also took on a target of 15% of energy from renewable sources by 2020. In 2019, the share was 12.3%.<sup>19</sup> The UK also adopted an indicative target of 40% of electricity generation to come from renewable sources by 2020, and by 2019 this had reached 37.1%, with a sharp rise in capacity and generation especially after 2010.<sup>20</sup>

Denmark is generally on track to meet the targets in the 2012 Energy Agreement (Dyrhaug 2020). The Agreement specified that GHG emissions should be 34% lower in 2020 than in 1990, and by 2019, provisional figures pointed to a 35% drop.<sup>21</sup> A target of 35% of energy to come from renewable sources by 2020 in the Agreement exceeded Denmark's target under the EU Renewables Directive. By 2018, the country had already reached 35.7%.<sup>22</sup> Denmark is also close to the 50% target for wind power generation as a share of electricity consumption by 2020, at 47% in 2019,<sup>23</sup> although it is still some way off a target of 70% of electricity to come from all renewables, at 62% in 2018.<sup>24</sup>

The two countries have also seen similar levels of investment in renewable energy since 2010, once scaled for the size of their economies, at 0.37-0.39% of GDP a year (Frankfurt School-UNEP Centre/BNEF 2019).

## 6.2 Operation under political challenge

Turning from outcomes to process, a key question is how commitment devices operate when they are tested by changing political circumstances. Here we compare two challenges for the respective cases: in the UK conflict over the setting of the fourth carbon budget in 2011, and in Denmark an attempt to change the treatment of offshore wind in 2016.

The fourth carbon budget in the UK case covers the period 2023-27. Unlike the first three carbon budgets, the draft fourth budget recommended by the CCC in 2011 potentially implied greater effort by the UK relative to the rest of Europe and raised concerns about competitiveness. This led to disagreement within the government, which consisted of a coalition between the Conservative party and the Liberal Democrats, an unusual situation for the UK. However, reflecting the fact that political parties in majoritarian systems are effectively internal coalitions (Bawn and Rosenbluth 2002), this conflict occurred within both parties rather than simply across them. The Business Secretary (Lib Dem), supported by the Chancellor (Conservative) and the Transport Secretary (Conservative), took the view that the CCC proposals for the fourth budget would impose too many costs on the economy and could not be agreed as they stood.<sup>25</sup> They were opposed by the Energy and Climate Change Minister (Lib Dem) and the Environment Secretary (Conservative). Emails between the different actors were leaked to the media.<sup>26</sup> The deeply split Cabinet could not come to an agreement and in the end the decision to accept the fourth budget was taken by the Prime Minister, influenced by a close adviser, over a weekend (Interview 10).

Denmark has also seen conflict over elements of policy that were covered by the 2012 Energy Agreement. In 2015, elections led to a new Venstre minority government. Venstre is an economically liberal party historically concerned about the costs of the expansion of renewable energy, especially for Danish business. Despite having instigated the original version of the Agreement in 2011 and signing the final Agreement in 2012, the new Venstre government began to seek to scale back ambition, adopting the slogan of 'green realism' and the idea of making it 'cheaper to be Danish' (Interviews 5, 6 and 8). The party seems to have been particularly concerned to signal to its business support base that it heard concerns about cost (Interview 8). Based on the idea that Denmark had already done a lot on both emissions



reduction and renewable energy, Venstre argued that the country should ‘reap the benefits of past investments’ (Interview 7).

In early 2016 the government (by now a coalition) put forward a plan to reduce and then phase out the public service obligation (PSO) levy on bills that finances the payment of subsidy to wind projects in Denmark. The plan involved the cancellation of a 350MW tender for near-shore wind and a cap on the price offered for the Kriegers Flak offshore wind project, both of which developments made up part of the 2012 Energy Agreement (Weston 2016a).

There was a strong reaction against the proposals from the more left-wing parties, and even Venstre’s coalition partner, the Conservative People’s Party, was unhappy (Interview 7). The nature of the 2012 Agreement prevented Venstre from making unilateral changes in areas that were considered *forlig* (see Section 3 above), because all signatories had a veto. Venstre was required to re-enter negotiations with the other parties, who were opposed to the proposed constraints on wind projects. These negotiations led to compromise in November 2016, in which the projects went ahead as originally planned in the Agreement, but the phase out of the PSO and a transfer of the financing of wind over to general taxation between 2017 and 2021 (which was not in the Agreement) was accepted by the other parties (Weston 2016b).

In both Denmark and the UK, the frameworks for credible commitment have thus withstood episodes of challenge. However, there is a key difference. In the case of Denmark, with negotiated political agreements, there is a clear ordered process for resolving conflicts within the commitment framework. Parties to the agreement can exercise a veto and instigate a re-negotiation, all within the political sphere. By contrast, in the UK, when there is disagreement within government about the recommendation of the CCC, the process for its resolution is effectively set by less ordered, informal conventions governing cabinet politics. In the case of the disagreements over the fourth budget these involved both complex multi-party negotiations between government departments, the Treasury and the Prime Minister, as well as manoeuvres and briefings played out through the media.

## 7. Conclusions

Credible commitment is important for successful sustained action to mitigate climate change. However, there has been a virtually exclusive focus on legislation and delegation as *the* route to such commitment, in part driven by the high profile of the UK’s CCA. This article has

presented evidence that an important contribution to creating credible commitment in Denmark has been made through a different commitment device, i.e. negotiated agreements between political parties. Such agreements would be very difficult to broker in the UK. In Denmark they do not replace legislation, and Denmark's most recent climate legislation has become more like the UK's CCA, but there is a sense in which the agreements underpin legislation.

The article has also made the argument that different routes to credible commitment taken in the two countries are closely related to their electoral systems and resulting political institutions and dynamics. In this sense, the legislation and delegation approach should be seen as contextual, rather than universal. In addition, the different commitment devices have consequences for how accountability and enforcement work in the two cases, with political parties playing the central role in Denmark while civil society actors play a key role in the UK. Both routes to credible commitment have functioned reasonably well, and both have survived episodes of challenge, with the basic structure of the commitment device remaining in place, although the Danish approach provided a more ordered mechanism for resolving conflict.

The aim of the paper has been to open up the debate on climate policy commitment devices to a greater range of possibilities, but there are a number of directions in which the research could be extended. One is how far other countries with electoral systems similar to Denmark's also follow a political agreement route to climate commitment. Another is that beyond the contrast between majoritarian vs PR electoral systems, there are other institutional dimensions that may have consequences for how credible commitment can work. These may include, for example, federalist vs centralised states, and variation in the number of veto points more widely, or in institutions for interest representation (i.e. corporatism vs pluralism).

A third direction is that while this study has looked mainly at how the two commitment devices have worked to prevent backsliding, equally important is how they will work to create confidence that a long-term direction of policy will be followed in future. As decarbonisation deepens and accelerates, and attention shifts from upstream changes in power generation to downstream changes involving households in heat and transport, the challenge of creating this confidence will increase. Certainly, in the UK, there is increasing interest in whether the legislation and delegation approach can be augmented in some way to bring

together different social and economic constituencies in a national dialogue (Fankhauser et al 2018). At present, in part based on recent experience in Ireland, there is considerable interest in citizen’s assemblies, with experiments at both national and city<sup>27</sup> level. However, it is not yet clear whether these will generate the broad legitimacy and traction needed.

## Appendix – Interviews

**Table A.1**  
**Interviews**

	<b>Interviewee</b>	<b>Date of interview</b>
1	Former special advisor to Chancellor of the Exchequer, H.M. Treasury, UK	23 November 2012
2	Comparative political economy academic, Copenhagen Business School	10 November 2014
3	Former senior official in National Infrastructure Commission, UK	12 March 2018
4	Official in secretariat of Committee for Climate Change, UK	25 April 2018
5	Climate change advisor, Danish NGO	27 August 2018
6	Senior official, Ministry of Energy, Utilities and Climate, Denmark	28 August 2018
7	Political science academic, Roskilde University, Denmark	28 August 2018
8	Political science academic, Aarhus University, Denmark	30 August 2018
9	Former special advisor to Secretary of State for Environment, UK	20 November 2019
10	Former director, UK NGO	30 September 2020

### Declaration of interest statement

No potential conflict of interest was reported by the author(s)

### Notes

<sup>1</sup> <https://www.legislation.gov.uk/ukpga/2008/27/contents>

<sup>2</sup> Both Powell (2001) and Lijphart (2012) use Gallagher’s index of disproportionality. In Powell (2001), Denmark scores 1.7 and the UK 14.4. In Lijphart (2012), Denmark scores 1.71 and the UK scores 11.7.

<sup>3</sup> There were indeed calls for the repeal of the CCA during the first half of the 2010s, although only from fairly marginal figures (Lockwood 2013)

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<sup>4</sup> For example, there was a series of abrupt and unexpected policy changes to support for some renewables in the UK in 2015 (ECCC 2016, Lockwood 2016), and a subsequent collapse in investment in 2018. There have also been sudden changes and reversals in carbon price floor and fuel duty policy, the framework for carbon capture and storage, and energy savings schemes, leading to the Chair of the Committee on Climate Change writing to the government in 2015 to express concerns about policy uncertainty and resulting ‘stop-start investment’ (Letter from Lord Deben to Amber Rudd, Secretary of State for Energy and Climate Change, 22 September 2015, Available at: <https://www.theccc.org.uk/wp-content/uploads/2015/09/220915-CCC-letter-to-Rt-Hon-Amber-Rudd-MP.pdf>, (accessed 3 October 2018))

<sup>5</sup> <http://rumaenien.um.dk/en/about-us/news-from-the-embassy/newsdisplaypage/?newsid=80e20505-ccb5-451f-8c7b-55527887cea3>

<sup>6</sup> <https://investindk.com/insights/new-ambitious-danish-energy-agreement#:~:text=In%20June%202018%2C%20the%20Danish,goals%20leading%20up%20to%202030.>

<sup>7</sup> [https://www.altinget.dk/misc/Retf%C3%A6rdig%20retning%20for%20Danmark\\_2019-06-25\\_ENDELIG.pdf](https://www.altinget.dk/misc/Retf%C3%A6rdig%20retning%20for%20Danmark_2019-06-25_ENDELIG.pdf)

<sup>8</sup> <https://www.iea.org/policies/606-danish-energy-agreement-for-2012-2020>

<sup>9</sup> <https://www.klimaraadet.dk/en/about-danish-council-climate-change>

<sup>10</sup> In turn the 2018 Agreement requires a successor Agreement to be negotiated by 2024.

<sup>11</sup> <https://investindk.com/insights/new-ambitious-danish-energy-agreement>

<sup>12</sup> In Birchfield and Crepaz’s (1998) terminology, these are ‘commitment’ veto rights, whereas those created by delegation are ‘competitive’ veto rights.

<sup>13</sup> According to Duverger’s law, there will be only two

<sup>14</sup> This dynamic can be seen clearly in the attempts at cross-party negotiations on a Brexit model in 2019.

<sup>15</sup> Although even this is unclear- see Fankhauser et al (2018) and Brunner et al (2012)

<sup>16</sup> This can be seen through what happened when the government delayed publishing its plans for meeting the fifth budget, which was set in July 2016, until October 2017. When it was published, this plan (HMG 2017) also did not fully meet the budget. Precisely along the lines discussed, the role of supporters of the Act in civil society was crucial. There were multiple calls from environmentalist groups for the plan to be produced, and energy industry actors complained of the uncertainty created by the delay. The group Client Earth threatened legal action against the government.

<sup>17</sup> Excluding Malta and Luxembourg

<sup>18</sup> Following the financial crisis, economic growth was lower than was expected at the time that the carbon budgets were set in 2009. Conversely, fossil fuel prices were higher than had been assumed in 2009, leading to lower demand than would otherwise have been the case. Additionally, a change in accounting for the UK’s share of the EU ETS cap meant that emissions attributed to the UK were cut by almost 300 MtCO<sub>2e</sub>, almost 11% of the second budget. In the absence of these factors, the first and second budgets would not have been met (Cambridge Econometrics 2019).

<sup>19</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/904823/DUKES\\_2020\\_Chapter\\_6.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904823/DUKES_2020_Chapter_6.pdf)

<sup>20</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/904805/DUKES\\_2020\\_Chapter\\_5.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904805/DUKES_2020_Chapter_5.pdf)

<sup>21</sup> <https://ens.dk/en/our-services/statistics-data-key-figures-and-energy-maps/annual-and-monthly-statistics>

<sup>22</sup> <https://ec.europa.eu/eurostat/web/energy/data/shares>

<sup>23</sup> <https://ens.dk/en/our-services/statistics-data-key-figures-and-energy-maps/annual-and-monthly-statistics>

<sup>24</sup> <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20200129-1#:~:text=The%20share%20of%20total%20gross,up%20from%2031%25%20in%202017>

<sup>25</sup> <https://www.theguardian.com/environment/2011/may/10/adair-turner-carbon-budgets-row>

<sup>26</sup> <https://www.theguardian.com/politics/2011/may/09/vince-cable-chris-huhne-carbon-emissions;>

<http://blogs.ft.com/westminster/files/2011/05/vince-letter-jp2.pdf>

<sup>27</sup> E.g. <https://www.climateassembly.uk/>, <https://www.leedsclimate.org.uk/>,

[https://www.oxford.gov.uk/info/20011/environment/1343/oxford\\_citizens\\_assembly\\_on\\_climate\\_change](https://www.oxford.gov.uk/info/20011/environment/1343/oxford_citizens_assembly_on_climate_change)

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