Northern Ireland Assembly

Research and Information Service
Bill Paper

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Climate Change (No.2) Bill

NIAR 174-21

The following Bill Paper provides an overview, comparison and consideration of the Northern Ireland Climate Change (No.2) Bill 2021. Bill papers are produced on an impartial, objective and non-partisan basis by RaISe in order to support Members' scrutiny of legislation.

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Key Points

- The Climate Change (No.2) Bill (Bill No.2) was introduced to the NI Assembly by DAERA Minister Edwin Poots MLA on 5 July 2021.
- Currently NI does not have specific climate change legislation and targets. It contributes to the UK Climate Act 2008.
- DAERA conducted a consultation on possible proposals for a NI Climate Change Act (December 2020-February 2021).
- The Bill provides for the following:
  - At least 82% reduction in greenhouse (GHG) gas emissions by 2050 – compared to net zero under the other legislative examples presented. This is a net reduction target, meaning all GHGs contribute to the reduction.
  - A greater degree of flexibility with targets compared to other examples through the power to amend.
  - Duty on all NI departments to achieve targets and budgets under the Bill. Other examples put responsibility on government and Ministers (UK, Scottish and RoI Acts). Bill No.1 is not clear on this aspect.
  - Minimum reporting requirements by DAERA on budget implementation, progress and target statements etc, similar to other UK jurisdictions.
  - Reporting requirement by public bodies, compared to voluntary reporting under the UK Act (and Bill No.1).
  - Provides for a partial Regulatory Impact Assessment (RIA), Rural Needs Impact Assessment and cost analysis based on CCC advice.
  - No set up or reporting duties by an independent Climate Commission, compared to Bill No.1.
  - Similar to other examples, it does not appear to provide for enforcement of targets etc through offences, fines and sanctions.
  - There do not appear to be specific provisions for terms such as ‘just transition’, similar to other examples, or transboundary/cross-border considerations.

Contents

1 Introduction

The following Bill Paper is produced by RaISe to assist all Members with the scrutiny of the Climate Change (No.2) Bill as introduced. It provides an overview of the main provisions, with comparisons with other primary climate change legislation across the UK and RoI. It also provides some areas for potential further consideration.

2 Background

The Climate Change (No.2) Bill (Bill No.2) was introduced to the Northern Ireland (NI) Assembly by the Department for Agriculture, Environment and Rural Affairs (DAERA) Minister Edwin Poots MLA on 5 July 2021.[1]

It is in response to the New Decade New Approach (NDNA) commitment to introduce legislation and targets for reducing carbon emissions in line with the Paris Climate Change Accord. The NDNA further illustrated that this should be achieved through the Executive bringing forward a Climate Change Act (Appendix 2 NDNA).

According to the accompanying Explanatory and Financial Memorandum (EFM), the Bill aims to create a framework that will establish a pathway to achieving emission reduction targets in NI to make a fair and equitable contribution to the achievement of the UK 2050 net zero target[2].

A consultation was conducted by DAERA from December 2020 to February 2021 "Discussion Document on a Climate Change Bill for Northern Ireland". It received 269 responses. 48% were in favour of NI contributing to UK net zero by 2050 (Bill No.2 with an 82% reduction) and 40% in favour of a NI target of net zero by 2050 (Bill No.1 aims for net zero by 2045). The remaining 12% did not know.

3 Overview/outline of the Bill

The Explanatory and Financial Memorandum (EFM) accompanying the Bill provides an overview and description of all the provisions. The Bill has 41 clauses and is divided into five Parts. It makes provisions for addressing GHG emissions, without the addition of other targets e.g. biodiversity, nitrogen etc., nor the setting up of any independent bodies.

The following is a brief overview of what the Bill provides for:

[1] NI Assembly Executive Bills: http://www.niassembly.gov.uk/assembly-business/legislation/2017-2022-mandate/primary-legislation---bills-2017---2022-mandate/climate-change-bill/

[2] EFM http://www.niassembly.gov.uk/globalassets/documents/legislation/bills/executive-bills/session-2017-2022/climate-change-no.-2-bill/climate-change-no.-2--bill---efm---as-introduced.pdf

- A long term (2050) net greenhouse gas emissions reduction target to be set 'at least 82% lower from 1990 levels', with interim targets of '48% lower by 2030' and '69% lower by 2040'.
- Setting by DAERA of 5 yearly carbon budgets. These set a cap on GHG emissions for NI for 5 years, in line with set carbon accounting practices and principles.
- Reporting requirements by DAERA, which include:
    - Carbon budget implementation reports on how budgets will be met;
    - Final carbon budget statement reports which set out how completed budget was met;
    - Statements for interim target years and the long term 2050 target;
    - 'Shortfall reports' which lay out how shortfalls in meeting budgets will be addressed;
    - Interim, and end of programme, progress reporting to the Assembly on carbon budgets.
- A requirement to obtain independent but non-binding review of progress from the UK Climate Change Committee (CCC) on meeting emissions reduction targets, carbon budgets, and programmes;
- Enabling provisions giving power to DAERA, through secondary legislation, to require climate change reporting by public bodies;
- A duty on all NI Departments, making them responsible for achieving the requirements of the Bill.

4 Comparisons

The following section presents the main provisions contained in Bill No.2, and how these may compare with other pieces of primary and draft climate change legislation discussed in Appendix 1 and 2. This section also provides other areas for potential further consideration and clarification. It is essentially an overview of the points covered in Appendix 1 (comparison across UK jurisdictions, RoI and Bill No.1) Appendix 2 (Observations and considerations) and Appendix 3 (Direct comparison with Bill No.1). The blue boxes provide further consideration questions that have been raised throughout Appendix 2 and 3.

The legislation referred to in this section (and the Appendices) are:

- Climate Change Bill (Bill No.1),
- Climate Change (No.2) Bill (Bill No.2),
- UK Climate Change Act 2008 (the UK Act), t
- Scottish Climate Change Act 2009 (Scottish Act 2009) as amended by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 (Scottish Act 2019)

- The RoI Climate Action and Low Carbon Development (Amendment) Act 2021 enacted 23 July 2021 (the RoI Act 2021) amending the Climate Action and Low Carbon Development Act 2015 (RoI Act 2015)
- Also the UK CCC advice letter provided to Minister Poots in April 2021.

The following sections provide examples of primary climate change legislation. Therefore, Wales is not specifically discussed. The UK Climate Change Act extends to Wales. However, the Environment (Wales) Act 2016 (as amended) introduces a duty on the Welsh Government to develop carbon budgets for Wales. See Appendix 1 for more detail on Wales.

4.1 What provisions does Bill No.2 contain?

The following section provides an overview of the provisions contained in Bill No.2 and how these compare with the other examples shown above and discussed in the Appendices.

4.1.1 A smaller overall reduction target compared to the others

Bill No.2 provides for at least 82% net reduction of all GHGs while other UK legislation, and Bill No.1, provide for net zero. RoI has a National Objective, that aims for a "climate neutral economy" this is defined as "*a sustainable economy and society where greenhouse gas emissions are balanced or exceeded by the removal of greenhouse gases*" (s.3). which could be reasonably assumed to imply net zero. Ministerial and Government commentary on the Act also describe it as setting the path for net zero[3] (see Appendix 1 Table and Appendix 2 s.1 for more detail). While the CCC also suggests an at least 82% reduction in GHGs, it also suggests net zero CO2, which Bill No.2 does not.

4.1.2 Provides for a net target

Similar to Bill No.1 and other UK jurisdictions, Bill No.2 provides for a net reduction target. Unlike gross reduction, which would require all gases to individually reach the reduction target, net reduction means all GHGs contribute (and possibly in varying amounts depending on their ability to reduce) to the overall reduction target. Gas emissions will need to be reduced as close to the reduction target as possible, for emissions removal (both through natural sinks and technology mainly in the form of carbon capture and storage) to make up the shortfall.

[3] DECC(23 July 2021) Press release: Ireland's ambitious Climate Act signed into law https://www.gov.ie/en/press-release/9336b-irelands-ambitious-climate-act-signed-into-law/

The key difference is that Bill No.1 requires all gases to reduce further to contribute to zero, rather than 82% reduction under Bill No.2. So, where some gas emissions may not reduce enough, others may have to go further through reductions and removal to make up for the difference and by so doing create a balance.

As an example, to achieve an 82% reduction in all GHGs, the CCC advice states this requires net zero CO2 and a 42% reduction from methane during the 2020-2050 time period.

Further considerations

- Does an at least 82% reduction mean all GHGs must contribute to an overall reduction, rather than reach that reduction individually?
- Will some gases have to go further to make up for those that cannot reduce enough? If so what gases?
- What is considered the easiest GHG emission to reduce in NI and which GHG will prove most challenging to reduce here?
- Have either the targets or any underlying assumptions by the CCC been locally assessed in terms of how accurate or deliverable they are?

- According to the CCC advice, to achieve at least 82% reduction in GHG means net zero CO2 and 42% reduction in methane 2020-2050.
- While it is not stated on the face of the Bill, will there be individual and separate GHG emissions reductions to meet the 82% reduction?
- Will these be provided in secondary legislation?
- Will individual contributions to the overall 82% reduction depend on individual gases' ability to reduce?
- Would they be gas or sector specific?

- In comparison, to achieve net zero under Bill No.1, could some gases have to go beyond zero to make up for those that can't reduce enough to create the balance by 2045?
- How much more of a reduction to the UK overall figure would NI net zero contribute compared to an 82% reduction?

4.1.3 Power to amend targets

The UK Act and Scottish Acts allow for changes to their overall target year and Bill No.1 only allows for the target year to be brought forward. However, Bill No.2 appears to offer the greatest amount of flexibility through the ability to adjust emissions targets (by year and amount) and the baseline, subject to UK/international law, science and technology, or advised by CCC.

Amendments are to be made by regulations, which are to be approved by the Assembly (cl.30 -cl.32).

The baseline in Bill No.1 is 1990 for all GHGs, whereas Bill No.2, similar to the UK Act, is 1990 for CO2, methane, nitrous oxide and 1995 for all others.

Further considerations

- Does the power to amend emission targets under Bill No.2, allow for the 2050 target year to be brought forward or pushed back, and allow for its percentage reduction to be reduced?
- Does it allow for separate emissions targets?
- How important is the power of adjustment to keep targets in line with changing methodologies etc.? For example, we have already seen changes to emission reporting with the addition of peatlands, as seen in the latest Northern Ireland Greenhouse Gas Emissions 2019 (Appendix A) .
- Will the differences in approach to baselines under both Bills need to be considered, in order to ensure continued consistency in monitoring, reporting and comparison across the UK?

4.1.4 Budgets

Similar to the UK Act and Bill No.1, Bill No.2 also provides for 5 year carbon budgets. Carbon budgets relate to all GHGs, not just carbon alone, similar to the UK Act, RoI Act and Bill No.1. Some of the main differences include:

- Bill No.1 also provides for nitrogen budgets whereas Bill No.2 does not.
- Both Bills require advice from the CCC with the setting of budgets. However, under Bill No.1, budgets are set under the climate action plan (CAP) by the Executive Office, but they are set through regulations by DAERA under Bill No.2.
- Bill No.2 also provides for carbon accounting practices such as carbon setting principles in line with overall and interim targets (cl.13) and timing for setting budgets (cl.14). It also provides details on the ability to carry emissions over from one budgetary period to another and the impacts this may have on budgets. In comparison to Bill No.1, which does not appear to provide the same level of detail under cl.3 (5) in relation to the setting of budgets.

Further considerations

- The development of NI specific budgets is a first for NI. What benchmarking exercises will be required/carried out for the development of budgets under secondary legislation in Bill No.2?
- Will benchmarking be done on a per department, sector and or gas basis?
- How easy will it be to benchmark all gases, particularly those gases for which it is harder to capture data from all sources?

4.1.5 Carbon accounting

Bill No.2 (Part 1) provides information on methodologies around carbon accounting and emphasises that NI Emissions are only those from NI sources, and removals are only those removed from the land use, land use change and forestry (LULUCF) sector in NI (however, definition of removals may be amended by DAERA cl.7)).

Bill No.2 also provides DAERA with the power to make regulations to include international aviation and shipping emissions in NI's overall emissions (cl.8). It also provides powers for DAERA to determine when carbon units may or may not be debited or credited to the NI account (cl.9).

Bill No.1 does not appear to provide the same level of detail on methodologies. However, it provides a limit of 25% on carbon credits purchased by DAERA, and refers to removals from the LULUCF sector (similar to Bill No.2, but with no power to amend this).

Similar to the Scottish Acts and the UK Act, Bill No.2 provides for a tracking scheme with the options to be set up under an existing scheme. While Bill No.1 also provides for a tracking scheme, the use of an existing scheme is not provided as an option.

Further considerations

- Similar to Bill No.1 and the UK Act, does Bill No.2 provide a limit on the purchase of international credits?
- And will this be per budgetary period (as under the UK Act)?
- Bill No.1 only accounts for removals by the LULUCF sector under its carbon budget.
- Does Bill No.2, allow for the definition of net NI emissions to be altered to include both LULUCF sector and engineered removals, should removal technologies be an option in the future?
- Or is the current position based on the advice from the CCC (2020) around NI's lack of CO2 storage sites and therefore lack of suitability for carbon removal technologies e.g. carbon capture and storage?
- Do both Bills provide for a different type of limit on the use of credits e.g. limits on their use towards the net amount under Bill No.2 (cl.9), and limits on their purchase by DAERA in Bill No.1?
- Bill No.2 does not allow credited units to offset other gases elsewhere, so as to avoid double counting. Does Bill No.1 have this precaution?
- Does DAERA have remit over international aviation and shipping – or is this purely for emission monitoring rather than regulatory purposes?

4.1.6 Responsibility on Departments

Bill No.2 places responsibility on NI Departments to achieve targets and budgets, and on DAERA to produce them. The other UK jurisdictions put responsibility to both achieve and produce targets etc on the Secretary of State (SoS) and Scottish Ministers. Under the RoI Act 2021, the State and Government are responsible for achieving the "national transition objective" (cl.3) and the Minister is responsible for producing targets, carbon budgets, sectoral emission ceilings, CAP etc.

Bill No.1 requires budgets and targets to be produced under the CAP by the Executive Office, compared to DAERA under Bill No.2. Also, Bill No.1 is not clear about who is responsible and accountable for achieving targets, budgets, CAP etc.

Further considerations

- Who is best placed and resourced to produce targets/budgets – Executive Office under Bill No.1 or DAERA under Bill No.2?
- Who is held accountable for achieving targets under Bill No.1?
- Under Bill No.2 will some sectors be required to make more reductions than others?
- Will NI departments be held accountable for achieving targets and budgets under Bill No.2?
- Will departments be responsible for making sure sectors comply with targets?
- Will departments have powers to ensure sectors comply?
- What happens with sectors that cross cut a number of departments?
- Are there any sanctions/fines for not meeting targets?
- Are the targets under both Bills enforceable in Court?

For example, the Dutch Climate Act has an overall objective of 95% reduction in GHG emissions by 2050, with a supporting 2030 target of 49%. However, according to commentary on the Act, neither target constitutes an obligation that can be enforced in a court of law. They merely provide a political mandate for government, rather than being enforceable in the courts:

> *The explanatory memorandum thus explains that the hard binding target provides a clear signal to industry on the one hand but will not be legally enforceable in a court of law on the other. In other words, the target is meant to be binding on government, while accountability must be discussed in the political arena only, not in court.* (Van Der Veen and De Graaf (2020) p.466)

4.1.7 Reporting

Bill No.2 (Part 3) has the following reporting requirements by DAERA on targets and budgets:

- Carbon budget implementation reports on how budgets will be met;
- Final carbon budget statement reports which say how completed budget was met;
- Statements for interim target years and the long term 2050 target;
- 'Shortfall reports' which lay out how shortfalls in meeting budgets will be addressed;
- Interim, and end of programme, progress reporting to the Assembly

- Duty on public bodies to report on their duties under the Bill (mitigation and adaptation).

Similar to other UK jurisdictions, Bill No.2 also requires non- binding progress advice to be given by the CCC. Reporting requirements are laid out clearly under Part 3 for DAERA, and Part 4 for the CCC.

Reporting is conducted by government in other UK jurisdictions, SoS (UK Act) and Ministers (Scottish Act). RoI requires the Advisory Council to report, with input from Ministers and government on sectoral duties.

Bill No.1 requires the independent Climate Commissioner to provide annual CAP reports, with advice from the CCC (cl.4). Bill No.1 requires reporting on an annual basis and for a wider range of targets, compared to Bill No.2. For example, Bill No.2 requires interim reporting once during a 5 year budget period, with a final statement on budgets and targets within 2 years of the end of the budget period, or target year (2030, 2040, 2050).

Bill No.1 has provision for legislative review of the Act by the Climate Commissioner. However, Bill No.2 does not appear to have such a provision.

Bill No.2 has a reporting duty for public bodies, unlike Bill No.1, which is voluntary under s.60 of the UK Act 2008 (cl.3(3)) (see next s. 4.1.8).

Further considerations

- Is progress reporting best carried out by an independent body (under Bill No.1) or by DAERA (under Bill No.2)?
- Do the benefits of independent reporting outweigh the costs of set up for an independent Commissioner?
- Would non-binding advice from the CCC under Bill No.2 be considered enough for objectivity?
- Will annual reporting on a wider range of targets (GHGs, nitrogen, biodiversity and soil and water quality) under Bill No.1 require more resources, expertise and costs, compared to reporting every budgetary period on GHGs only under Bill No.2?
- Will the CCC be best placed and resourced to provide advice on progress reports under Bill No.1 (annually and wide range of tatrgets) or Bill No.2 (every budgetary period and GHGs only, similar to current roles in other jurisdictions)?
- Due to the duty on departments under Bill No.2, will monitoring and reporting be carried out per department, sector, or gas, or a combination?
- RoI has provision for Minister and sectoral Ministers to appear before an Oireachtas committee to report annually, if requested. Would this extra level of reporting requirement be considered useful?
- Is there no form of legislative review report under Bill No.2, similar to Bill No.1?
- Will adaptation reporting, including by public bodies, supplement adaptation reporting requirements under the UK Act 2008?

4.1.8 Public body duties

Bill No.2 (cl.21) puts adaptation and mitigation reporting duties on public bodies. However, the UK and Bill No.1 (cl.3 (3)) use a voluntary approach, for adaption reporting only under the Climate Act 2008. Scotland produces a "major players" list for those bodies that must report[4]. (See Appendix 2 section 8 for more detail)

Further considerations

Under Bill No.2 public bodies are described as those with functions of a public nature; or s.250 of Planning Act 2011).

- Will public bodies be identified under subsequent regulations, similar to "major players" under Scottish Act 2009 (s.44-6)?

4.1.9 Advice from one body

Similar to the other UK jurisdictions, under Bill No.2 non-binding advice is to be given by the UK CCC on all targets and budgets. However, the advisory role under Bill No.1 is more complex. Advice is to be sought by the UK CCC on the CAP, however it is not clear who advises on the overall 2045 target. Other bodies are listed for more specific elements, e.g. the RoI Advisory Body and Intergovernmental Panel on Climate Change (IPPC) on the climate declaration, N/S bodies on the transboundary element and Single Electricity Market (SEM) Committee on electricity and power sector.

Further considerations

- Would the need for independent advice on all targets, including the overall target, be considered best practice under Bill No.1?
- Would the addition of advice from other bodies under Bill No.2 , particularly in relation to transboundary issues, be considered best practice?

4.1.10 Consultation

With Bill No.2, a consultation exercise was conducted by DAERA on policy proposals for a Climate Change Bill from 8 December 2020 to 1 February 2021 "Discussion Document on a Climate Change Bill for Northern Ireland". It received 269 responses: 48% preferred a Bill with targets to contribute to UK 2050 and 40% were in favour of

[4] Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Order 2015 https://www.legislation.gov.uk/ssi/2015/347/contents/made

net zero 2050 for NI. In comparison, with Bill No.1 there was no formal public consultation on all policy proposals. The EFM to Bill No.1 refers to an opinion poll conducted in February 2020 and published summer 2020. However, the Poll was based on green recovery in general and was not specifically designed for climate change proposals alone. Results showed support for a climate Act in NI with a target for net zero by 2045 (with 68% of respondents in agreement).[5]

4.1.11 RIA/Rural proofing

Regulatory Impact Assessment (RIA)

The EFM to Bill No.2 explains that a "partial RIA" was conducted to estimate costs and benefits of the Bill. The RIA refers to impacts at the UK level from the CCC and global level from the Stern Review, with very little reference to specific impacts at NI level. As the EFM states, further RIA and rural needs assessments will be required once more specific polices and measures are produced. Specific impacts are to be assessed once measures and policies for delivery of targets and budgets are produced for each budget period, subject to consultation. All secondary legislation will be subject to a cost RIA and other assessments.

In comparison, Bill No.1 did not provide for any form of an RIA at the Bill development stage. The Bill states that CAPs will undergo consultation (cl.3), but there appears to be no mention of RIA or rural proofing. Will a full RIA and rural proofing accompany CAPs under Bill No.1?

Producers of both Bills did not provide impact assessments on each individual sector.

Rural Proofing

A Rural Needs Impact Assessment was carried out for Bill No.2. However, full impacts will be determined once policies and approaches are produced. The EFM to Bill No.2 states there are likely to be impacts on the rural and agricultural sector due to efforts to reduce emissions:

> *This may lead to a requirement for some behavioural changes in terms of farming practices, changes in land-use and/or a need to reduce outputs from the sector e.g. in terms of livestock numbers.*[6]

There was no form of rural proofing/rural impact assessment conducted for Bill No.1. However, a recent impact assessment for Bill No.1 was commissioned by the Ulster

[5] For further detail on Bill No.1 consultation see RaISe paper (NIAR 88-21) Private Member Bill: Climate Change (Northern Ireland) Bill 2021 (P.39).

[6] Climate Change Bill No.2 EFM http://www.niassembly.gov.uk/globalassets/documents/legislation/bills/executive-bills/session-2017-2022/climate-change-no.-2-bill/climate-change-no.-2--bill---efm---as-introduced.pdf (p.18)

Farmers Union (UFU) and conducted by KPMG (August 2021)[7]. It suggests reductions of between 11 and 86% in cattle and sheep numbers are needed to hit the 2045 target in NI, with beef and sheep farm numbers reducing in less productive land areas and low lands. It also suggests that such reductions could lead to a 54% reduction in total employment on farms.

While there may be different opinions on the findings of this report, as yet, it is the only report produced that provides a sector level impact assessment specific to NI and bases most of its findings on approaches and data used by the UK CCC[8]. However, it only covers the agricultural sector. And it is quite clear that under both Bills, all sectors of the economy and wider society across NI will impacted.

Further considerations

- Will the 82% reduction under Bill No.2 require disproportionate reductions of gases and across sectors?
- Does the EFM to Bill No.2 suggest it may require a reduction in livestock numbers? Or more a focus on different methods e.g. feed type, different livestock type etc, to reduce overall output?
- Will a RIA be conducted for individual sectors, departments or both?
- When will further RIAs be conducted, at the development for secondary legislation stage? Will these accompany rural proofing and consultation?

The same questions could be asked for Bill No.1.

4.1.12 Cost Analysis

Similar to Bill No.1, the EFM of Bill No.2 states that it is difficult to accurately quantify costs at this stage. However, it does provide overall estimations and projections, using the data and advice from the UK CCC:

- The estimated indicative net cost of the Bill from 2022-2050 is around £4bn.
- Projected annual investment needs of £1-1.5bn from 2030 onwards. (Particularly for low carbon power, retrofit of buildings, batteries and infrastructure for e-vehicles.)
- To deliver the same services with lower emissions - additional net revenue need of £300m /yr peaking in early 2030s.
- Resource costs projected - <1% of 2018 GDP each year to 2050.

[7] KPMG (August 2021) Climate Change Bill Impact Assessment https://content17.co.uk/media/99/images/full/Climate-Bill-Impact-Assessment-Final-Report_1.pdf

[8] Ibid p.6

In comparison, Bill No.1 did not provide any form of costings for the implementation of provisions, reaching targets and set up of a new Climate Commissioner and Office.

The CCC (April 2021) provides the closest estimations to this target, for net zero by 2050, instead of 2045. It predicts that:

- An extra £900 million per year to 2050, on top of the costs for achieving 82%, would be required if removal technologies are used (the CCC debates in its 2020 letter whether NI would be suitable for these).
- To reach net zero 2050 would require a 50% reduction in output from NI's livestock sector.

The UFU commissioned research by KPMG, which was published in August 2021. It assessed the impacts of Bill No.1 on the agricultural sector in NI. Rather than specifically looking at the costs, it considered the potential economic loss and suggested that total economic output would fall by between 8 – 66% across the sectors analysed, with dairy and beef hit the hardest.[9]

That being said, there has been no specific analysis for all sectors across both Bills.

Further considerations

- Are there no sector specific impact analysis and costs analysis accompanying both Bills?
- Costs estimations under the EFM to Bill No.2 use estimations from the CCC. Are these estimations based on the CCC's balanced pathway approach e.g. for 82% reduction in GHG (with 42% reduction methane 2020-2050) and net zero CO2?
- Bill No.2 doesn't specifically imply net zero CO2, or any other contributions from other gases. Should there be any differences in approach to the CCC, will these have a bearing on the costs presented?
- The CCC 2018 emission amounts for NI (Table 4.1) are larger than those reported by DAERA in the latest statistics. The CCC costs will be based on reducing from a larger figure than DAERA reports. Will this make producing accurate costings under the Bill challenging?
- The CCC also provides estimations for reaching net zero by 2050, but not 2045 as provided under Bill No.1. Therefore, could the extra £900million per year on top of the estimation for reaching 82% be even more for net zero 2045?

[9] KPMG (August 2021) Climate Change Bill Impact Assessment https://content17.co.uk/media/99/images/full/Climate-Bill-Impact-Assessment-Final-Report_1.pdf (see p.5 headline figures).

4.2 Other areas of consideration

4.2.1 Contributions to the overall reduction

Similar to Bill No.2, the CCC advice (April 2021) states at least 82% reduction in all GHGs. However, it further explains that this would require net zero CO2 and a 42% reduction from methane during the 2020-2050:

This contribution to the UK Net Zero target would require Northern Ireland to reach net-zero CO2 emissions by 2050, as well as significantly reducing emissions of other GHGs including methane….

…In our Balanced Pathway, methane emissions in Northern Ireland fall by 42% from 2020 to 2050 [footnote 1][10]

However, it would appear that Bill No.2 does not require net zero CO2 emissions, or provide for methane's contribution.

Further Considerations

- Does DAERA feel that net zero CO2 emissions will not necessarily be required to to reach the overall reduction target?
- Will policy provide for individual GHG contributions to the overall reduction, similar to the CCC advice?
- If so, will individual contributions to the overall 82% reduction depend on individual gases' ability to reduce? I.e., would methane be considered as making a smaller contribution, compared to CO2?

(Also see Raise paper: **Methane and Biogenic Methane - an overview** (NIAR 175-21) s.5.2 and s.6)

4.2.2 Targets for biodiversity etc

Bill no.2 does not have targets for biodiversity, soil and water quality, nor does it have nitrogen budgets. It also does not provide for any form of annual targets. Bill No.1 has a wider range of targets in comparison to Bill No.2. It has annual targets for biodiversity, soil and water quality and GHGs as well as a nitrogen use ratio budget. The Scottish Act 2009 (as amended by the 2019 Act) also has annual targets, but for GHGs only. Scotland also provides for a nitrogen balance sheet (s.17 of the 2019 Act and amending s.8A of the 2009 Act). Similar to Bill No.1 's nitrogen use ratio, it requires the Scottish Minister to produce a baseline figure for nitrogen use (the ratio of nitrogen removed from the environment compared to total nitrogen inputs). However

[10] CCC (April 2021) Letter: Economic costs of setting and delivering a 2050 emissions target for Northern Ireland https://www.theccc.org.uk/publication/letter-economic-costs-of-setting-and-delivering-a-2050-emissions-target-for-northern-ireland/

this is used as a tool to monitor nitrogen and its contribution to achieving the overall target, it does not appear to set five year nitrogen budgets.[11]

Both Bills do not provide for a separate target for methane. Methane must contribute to the overall target under both Bills. In fact, none of the other jurisdictions provide for one. New Zealand has a separate methane target compared to its overall reduction targets for GHGs (this is discussed in more detail in RaISe paper ***Methane and Biogenic Methane - an overview*** (NIAR 175-21)). While the UK CCC does not necessarily advocate a separate methane target, its advice (April 2021) suggests that methane's contribution to an overall 82% reduction should be 42% 2020-2050 and CO2 would be required to be net zero. However, Bill No.2 does not provide for the individual contributions from each gas towards the overall reduction.

Further considerations

- Does DAERA consider that biodiversity and soil will be covered under existing and proposed strategies e.g. the proposed environmental improvement plan (or Environment Strategy) under the UK Environment Bill and existing Sustainable Agricultural Land Management Strategy?
- Will this be policy based rather than binding targets?
- Does DAERA consider that water quality targets are best placed under existing frameworks and their implementing legislation e.g. the Water Framework Directive and Nitrates Directive/Nitrates Action Programme (and associated implementing regulations).
- Does DAERA envisage that gases will have to contribute in varying amounts to the overall target based on their ability to reduce or be removed?
- Will this have a disproportionate effect on sectors?
- Will aiming for net zero all GHGs, versus an 82% reduction, have a bigger impact on sectors.

4.2.3 CAP and sectoral plans

CAP

Bill No.2 does not appear to provide for a specific climate action plan (CAP), similar to the CAP to be produced by the Executive Office under Bill No.1 setting annual targets and budgets. Under Bill No.2, any budgets and targets are to be laid out under secondary legislation, rather than a CAP.

The Scottish Act also provides for a CAP, but it is a framework for polices and plans, not binding targets. The UK Act requires the SoS to prepare policies and plans to meet the overall target and budgets (s.13). It also refers to a report laying out policies and plans, but does not refer to it as a CAP (s.14). The CAP in the RoI Act is to be in line with binding emissions ceilings, which makes it different from the rest.

[11] For more information see: https://www.gov.scot/policies/climate-change/nitrogen-balance-sheet/

However, under Bill No.2, similar to the UK Act, DAERA must submit a report to the Assembly outlining the implementation of the carbon budget to include proposals and policies that will be taken forward by NI Executive departments to meet a carbon budget (cl16).

Sectoral plans

Bill No.2 does not refer to sectoral plans under a CAP, similar to those under Bill No.1. Instead it refers to plans, policies and strategies produced at departmental level.

Under cl. 29, NI departments are to develop and implement plans, policies and strategies in relation to their duties and functions. And in performing their functions, all departments are to cooperate with one another (cl.29). Under the DAERA report in cl.16, each NI department is required to provide DAERA with detail on its proposals and policies within its areas of responsibility.

The RoI appears to be the only jurisdiction providing binding sectoral targets, known as sectoral emissions ceilings, to which sectoral measures and actions under the CAP are to align with. The UK Act is less specific in relation to the production of sectoral plans, with reference made to SoS reporting requirements on how budget policies and proposals will "affect different sectors of the economy" (s.14).

Further considerations

- Is the report by DAERA on the implementation of the budgets similar to a CAP that provides for policies and plans (like the UK and Scottish Acts)?
- If not, will Bill No.2 provide for a form of CAP?
- Is the duty on departments to produce and provide detail on their respective plans and policies (cl.16 and 29) considered a form of sectoral plan, similar to Bill No.1 and other jurisdictions?
- If not, will sector plans or policies be produced to help meet the overall target?
- How will departments cooperate under the duty in cl.29? Through the production of an overall cross-departmental plan/policies/strategy? Or individual departmental ones?

4.2.4 Independent reporting

Under Bill No.2, reporting and progress reporting on emissions, targets and budgets is to be provided by DAERA and laid before the Assembly (cl16-21). The CCC is to provide DAERA with reports on its views on DAERA's progress towards meeting budgets and targets. DAERA must respond to the reports, but the Bill does not state that the CCC reports are binding. This compares to Bill No.1 where all statutory reporting is to be provided by the independent Climate Commissioner. There are no provisions under Bill No.2 for a similar independent Climate Commissioner or Office.

Bill No.2 is similar to the other UK jurisdictions with reporting carried out by government, either SoS (UK Act), Ministers (Scottish Act), and progress reporting by the UK CCC which is non-binding. In the RoI Act, progress reporting is carried out by the Advisory Council, with respective Ministers including reviews of sectoral progress (s.12 of 2021 Act and 2015 Act).

Further considerations

- Is statutory progress reporting to be carried out by DAERA, with non-binding reporting and advice provided by the UK CCC?
- DAERA must respond to the UK CCC reports. However, must the suggestions be implemented or taken on board? Or is the decision left up to DAERA?
- DAERA's response to the CCC reports must be laid in front of the Assembly. Does the Assembly have the power to require DAERA to adopt CCC recommendations?
- Would non-binding advice from the CCC under Bill No.2 be considered enough for objectivity?
- Is progress reporting best carried out internally with external advice (as under Bill No.2) or independently (as under Bill No.1)?
- Would the benefits of independent reporting outweigh the costs of set up for an independent Commissioner?

4.2.5 Legislative review

Bill No.2 does not appear to have any provisions similar to Bill No.1 (cl.9) in relation to review of the working and effectiveness of the legislation (to be conducted by the Climate Commissioner every Assembly term). In fact, none of the others jurisdictions appear to have a similar provision to Bill No.1.

Further considerations

- Does the Bill provide for legislative review?
- If not, would a legislative review mechanism be useful in Bill No.2?
- Does DAERA feel there is no need for this due to the power to amend targets and budgets, both in terms of years and amounts?
- Could legislative review be a requirement under progress reporting?

4.2.6 Offences, fines or sanctions

Similar to the other UK Acts, RoI Act and Bill No.1, Bill No.2 does not appear to provide any provisions for offences, fines or sanctions in relation to the enforcement of emissions targets and budgets.

The CCC describes the UK Act as placing a legal duty on the UK Government for reducing GHG emissions in the UK[12]. However, questions have been raised in relation to the ability to enforce climate law in court.

For example, the Dutch Climate Act has an overall objective of 95% reduction in GHG emissions by 2050, with a supporting 2030 target of 49%. However, according to commentary on the Act, neither target constitutes an obligation that can be enforced in a court of law. They merely provide a political mandate for government, rather than being enforceable in the courts:

> *The explanatory memorandum thus explains that the hard binding target provides a clear signal to industry on the one hand but will not be legally enforceable in a court of law on the other. In other words, the target is meant to be binding on government, while accountability must be discussed in the political arena only, not in court.*[13]

Further considerations

- Are there any offences, fines or sanctions to enforce targets under Bill No.2?
- Are targets enforceable through court?
- Is accountability for reaching targets provided through reporting requirements, rather than enforcement measures?
- If so, how will this impact the ability of departments to ensure sectors comply, so as to meet their departmental duties under the Act?

4.2.7 Just transition

Bill No.2 does not appear to refer to the term 'just transition', or provide for similar just transition principles as mentioned in Bill No.1. Bill No.1, the Scottish and RoI Acts have just transition principles written into their provisions in varying degrees of detail.

Bill No.1 requires that sectoral plans must support: jobs/job growth; net-zero carbon investment and infrastructure; create work, reduce inequality, poverty, social deprivation (clause 3s.8). These are referred to in the EFM as "just transition principles". However, there is no further detail as to what exactly this means and how each of these are to be measured, monitored and achieved.

[12] UK CCC [online] A Legal Duty to Act https://www.theccc.org.uk/the-need-to-act/a-legal-duty-to-act/

[13] Van Der Veen and De Graaf (2020) Climate Litigation, Climate Act and Climate Agreement in the Netherlands (p.466) https://rgakdwebsitep.blob.core.windows.net/akdfiles/2753/Climate-Litigation-Climate-Act-and-Climate-Agreement-in-The-Netherlands.pdf

The Scottish Act 2019, compared to Bill No.1, provides more detail on the face of the Act, in relation to how these provisions are to be achieved through its climate action plan[14]. It defines just transition on the face of the Act as "*reducing emissions in a way which tackles inequality and promotes fair work, at the heart of Scotland's approach to reaching net-zero" (s.35).*

The Scottish Act also provides for a Just Transition Commission to advise Ministers on this aspect of sectoral plans. It has set out 24 recommendations to Scottish Minister for achieving just transition while delivering emissions targets. Examples include:

- Just Transition plans for high-emitting industrial sectors and land and agriculture, to include clear milestones out to 2045.
- Support small and medium sized enterprises to invest in their workforces.
- Scottish Government, local authorities and developers must commit to creating communities that embed low-carbon lifestyles, while improving our health and wellbeing.

Further detail see: Just Transition Commission: A National Mission for a fairer, greener Scotland

In September 2021, the Scottish Government made a response to these recommendations in relation to how it would address them. These can be found here: Just Transition - A Fairer, Greener Scotland: Scottish Government response

The RoI Act 2021 does not provide the same level of detail as the Scottish Act; however, it requires just transition to be taken into account in the production of its CAP and long-term strategy in order to "(i) maximise employment opportunities, and (ii) support persons and communities that may be negatively affected by the transition;" (s.6(4k)).

Further considerations

- It would appear that there aren't any just transition principles in Bill No.2, compared to Bill No.1.
- Is there a need for just transition principles to be written into the provisions?
- Is the Department considering addressing just transition principles through further policy?
- E.g. Could just transition principles, as they're applied under the Scottish Act in relation to its CAP and sectoral plans, be provided in relation to departmental reports on achieving budgets (cl.16) or departmental plans and policies (cl.29)?

[14] Section 35c of the Scottish Act explains just transition as reducing emissions in a way which tackles inequality and promotes fair work, at the heart of Scotland's approach to reaching net-zero

4.2.8 Transboundary element

Bill No.2 does not appear to provide for the same transboundary element that Bill No.1 refers to in relation to the production of its budgets under clause 3. Bill No.1 defines transboundary element as:

> *any negative impact on the environment of NI, including its waters and atmosphere, from activity which occurs in any of the following areas— (a) the Republic of Ireland; (b) Scotland; (c) Wales; and (d) England.* [15]

In fact, none of the other jurisdictions, including the RoI, appear to explicitly mention similar provisions for transboundary or cross border impacts.

There are slight differences in targets between both NI Bills and the RoI Act 2021. For example, Bill No.1 aims for the same target of net zero, but five years before the RoI Act of 2050. Bill No.2 aims for the same year of 2050, but a lower reduction target of 82% compared to net zero under the RoI Act.

However, both NI Bills are similar to the RoI Act in relation to methane where it must contribute to the overall target, and there is no separate target for it.

That being said, the full scale of differences may not be fully evident until the development of sectoral emission ceilings under the RoI Act and any further details on potential contribution from individual gases to the overall target and departmental plans under Bill No.2.

Further considerations

- Does the lack of a similar provision in RoI, mean that any transboundary/ impact is a one-way consideration?
- How will both Bills ensure co-operation and consideration of cross border impacts is a two-way process?
- Could the earlier target under Bill No.1 result in more stringent measures for sectors in NI compared to the RoI?
- Will the line-up of targets and measures under the RoI Act and both NI Bills depend on emissions ceilings developed by the RoI and further detail of individual gas contributions to the overall targets under both Bills?
- Will further development of approaches, budgets, plans etc under both Bills take into account sectoral emissions ceilings and sectoral plans under the RoI Act?

[15] Under clause 3 of Bill. No.1.

4.2.9 Carbon leakage

Bill No.1 and Bill No.2 don't appear to specifically mention the term carbon leakage in the same way as the RoI Act 2021 does. The European Commission describes carbon leakage as:

> *Carbon leakage refers to the situation that may occur if, for reasons of costs related to climate policies, businesses were to transfer production to other countries with laxer emission constraints. This could lead to an increase in their total emissions.*[16]

Compared to the other UK jurisdictions, the RoI Act appears to be the only one that refers to it specifically. S.6(4 (8)k) of the RoI Act 2021 requires the Ministers and Government to have regard to:

> *the risk of substantial and unreasonable carbon leakage as a consequence of measures implemented by the State to pursue the national climate objective;".*

S.6 (4(12) defines carbon leakage as:

> *the transfer, due to climate policies, of production to other countries with less restrictive policies with regard to greenhouse gas emissions;*

Further considerations

- What is NI's ability to measure and monitor carbon leakage?
- Would carbon leakage sit between the remit of both DETI and DAERA?
- Do the carbon accounting provisions provided under Bill No.2 provide the necessary safeguards in relation to carbon leakage?
- Is there a need to have a carbon leakage provision, similar to the RoI Act 2021?
- Or does DAERA consider sufficient safeguards are provided under the UK and EU Emissions Trading Scheme (ETS) for carbon leakage which encourage ETS companies not to outsource to other countries?

[16] EC [online] Carbon leakage https://ec.europa.eu/clima/policies/ets/allowances/leakage_en

Appendix 1: Comparison of main provisions across NI Bills, UK jurisdictions and RoI

The following table, and commentary under Appendix 2, make high-level comparisons of the main provisions of Bill No.2 with Bill No.1, and other primary Climate Change Acts from UK jurisdictions and the RoI. Legislation referred to in this section is as follows:

- Climate Change Bill (Bill No.1);
- Climate Change (No.2) Bill (Bill No.2);
- UK Climate Change Act 2008 (the UK Act);
- Scottish Climate Change Act 2009 (Scottish Act 2009) as amended by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 (Scottish Act 2019);
- The RoI Climate Action and Low Carbon Development (Amendment) Act 2021 enacted 23 July 2021 (the RoI Act 2021) amending the Climate Action and Low Carbon Development Act 2015 (RoI Act 2015);
- Also the UK CCC advice letter provided to Minister Poots in April 2021.

The following sections provide examples of primary climate change legislation. Therefore, Wales is not specifically discussed. The UK Climate Change Act extends to Wales. However, the Environment (Wales) Act 2016 (as amended) introduces a duty on Welsh Government to develop carbon budgets for Wales.

The Welsh Government accepted the new advice from the CCC in December 2020 for net zero by 2050 and has produced the following regulations, which came into force in March 2021:

- The Environment (Wales) Act 2016 (Amendment of 2050 Emissions Target) Regulations 2021 - amends the 2050 target from 80% to net zero.
- The Climate Change (Interim Emissions Targets) (Wales) (Amendment) Regulations 2021 - changes the 2030 target to 63% (currently 45%) and the 2040 target to 89% (currently 67%).
- The Climate Change (Carbon Budgets) (Wales) (Amendment) Regulations 2021 - sets Wales' third carbon budget.
- The Climate Change (Net Welsh Emissions Account Credit Limit) (Wales) Regulations 2021 - set a limit on the amount of carbon units that may be credited to the net Welsh emissions account in accordance with section 33(4) of the Environment (Wales) Act 2016.

Further detail can be found here.

Important to note:

Net zero GHG means "*achieving a balance between the amount of greenhouse gas emissions produced and the amount removed from the atmosphere*". It does not mean reducing all emissions to zero (which would be gross zero). Net zero recognises that there will be some emissions, and that these need to be off-set through natural sinks and carbon removal technologies[17].

Before considering the different targets displayed in the following table, it is important to establish the difference between net zero all GHGs and net zero carbon. Achieving net zero carbon means that only carbon must reach zero i.e. emissions will be in equilibrium with removals. Achieving net zero for all GHGs means that all gases must contribute to an overall zero, and therefore some may be required to reduce (or be removed) further than those not able to reduce as close to zero as possible.[18]

It is important to note here that Climate Change Bill No.1 refers to achieving "net zero carbon" in its overall 2045 target, but later defines this as meaning net zero all GHGs (cl2 (6)).

Consideration: There appears to be a complexity around the range of terms and definitions used in association with emissions targets. For example, there is the the use of net zero carbon (which in some cases is defined as including all GHGs (e.g. Bill No.1) and net zero CO2 (which the CCC advice for NI (2021) refers to as meaning CO2 only). These inconsistencies make consideration of methane emissions and comparisons of targets across different legislation, using different terminologies, challenging.

[17] Institute for Government [online] https://www.instituteforgovernment.org.uk/explainers/net-zero-target

[18] For further information see World Resources Institute (2019) What Does "Net-Zero Emissions" Mean? 8 Common Questions, Answered https://www.wri.org/insights/net-zero-ghg-emissions-questions-answered

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
Overall target	The Northern Ireland departments must ensure that the net Northern Ireland emissions account for the year 2050 is at least 82% lower than the baseline	The establishment in Northern Ireland of a net-zero carbon, climate resilient and environmentally sustainable economy by the year 2045. Also provides for aannual targets for GHGs, biodiversity, water and soil quality. To be set out in a Climate Action Plan (CAP).	It is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least [100%] lower than the 1990 baseline. Net UK carbon account means the amount of net UK emissions of targeted greenhouse gases (s.27). GHGs listed: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride, and any others identified by SoS. Interim of 78% reduction by 2030 as set under 6th Carbon Budget.	The Scottish Ministers must ensure that the net Scottish emissions account for the net-zero emissions target year is at least 100% lower than the baseline (the target is known as the “net-zero emissions target”). The “net-zero emissions target year” is 2045.	National Climate Objective: The State shall, so as to reduce the extent of further global warming, pursue and achieve, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy. 51% reduction of GHG by 2030 relative to a baseline of 2018 to be set through first 2 carbon budgets. ((cl.9 6A 6B)).

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
What this means	Target refers to net zero all GHGs as defined under clause 37 of the Bill (carbon dioxide; methane; nitrous oxide; hydrofluorocarbons; perfluorocarbons; sulphur hexafluoride; nitrogen triflouride). Therefore, all GHGs must contribute to overall 82% net reduction. This does not mean all gases must reach 82% individually. Therefore, some may need to balance out others. Similar to the [CCC 2021 advice](), which	The Bill defines "net zero carbon" as: a net reduction of greenhouse gas emissions by at least 100% from the 1990 baseline. This definition means the target relates to net zero all GHGs, so all GHGs must collectively contribute to net zero, 5 years ahead of any of the other examples in this table. The baseline is 1990 for all GHGs, whereas Bill No.2 and UK Act has a different baseline for some GHGs (e.g. UK Act: 1990 for carbon dioxide, methane, nitrous oxide	Net zero by 2050 for all targeted GHGs (same as Bill No.2 list, but doesn't include nitrogen trifluoride). Similar to Bill No.2 in relation to net zero and not gross zero as explained above*.	Net zero by 2045 for all GHG emissions (s.10, same as Bill No.2 list). Same as net zero meaning under No.2 Bill*. **Annual GHG targets** These coincide with the interim 2030 and 2040 targets (s.2): 2021- 57.9% 2022 – 59.8% 2023 - 61.7% 2030 – 75% 2040 – 90%	51% reduction all GHGs by 2030 with net zero by the end of 2050 at the latest. The face of the Bill does not explicitly mention net zero, but refers to terms such as a **climate neutral economy** by 2050, to which the definition implies net zero emissions[19]. Ministerial and Government commentary on the Act also describe it as setting the path for net zero[20] , in line with the RoI's

[19] The RoI Act defines climate neutral economy as: "a sustainable economy and society where greenhouse gas emissions are balanced or exceeded by the removal of greenhouse gases" (s. 3). This definition therefore implies net zero emissions.

[20] DECC(23 July 2021) Press release: Ireland's ambitious Climate Act signed into law https://www.gov.ie/en/press-release/9336b-irelands-ambitious-climate-act-signed-into-law/

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
	suggest 82% reduction on all GHGs. However, it states that this requires net zero CO2 and 42% reduction in methane (2020-2050). Bill No.2 does not specify this.	and 1995 for f-gases etc. (s.25)).		The full list up to net-zero in 2045 is provided here	PfG *Our Shared Future* (detailed below).
Overall responsibility	The duty on all NI Departments makes them responsible for achieving the overall 2050 target and budgets (cl.1-3 and 12). DAERA is responsible for producing them, including amendments. However, advice is to be sought by the CCC and approval by the Assembly.	The Executive Office is to produce and lay before the Assembly the Climate Action Plan (CAP) (contains annual targets, budgets, plans to meet overall the target) (cl.3). But the Bill does not explicitly say who is responsible and held accountable for achieving the overall target and CAP.	SoS is both responsible for producing and achieving the targets, budgets, and policies and plans etc. Advice is to be sought b the UK CCC with approval by the Parliament.	Scottish Ministers are both responsible for producing and achieving overall target, annual targets, polices and plans etc Advice is to be sought from the UK CCC with approval by the Scottish Parliament.	State and Government responsible for achieving the "national transition objective" (cl.3) Minister responsible for producing carbon budgets, sectoral emission ceilings, CAP etc.

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
	NI Departments are also responsible for: - Providing information on their responsible areas to DAEARA and CCC for progress reporting (cl.16) - Development and implementation of plans, polices and strategies (cl.29)				
Power of adjustment	Under Cl.4, by regulations, DAERA may amend the overall 2050 target and interim 2030, 2040 targets and may: (a) specify a different year for a particular emissions target;	This target cannot be adjusted to lower the target or move the date back. The EO may move the date forward and DAERA may add to the list of GHGs.	SoS may, by order, alter the percentage of the 2050 target and baseline year, add to gases listed, or aviation and shipping. Must be based on advice from CCC, developments in scientific knowledge on climate change, or changes	The Scottish Ministers may by regulations alter the net zero target to: (a)an earlier year, or (b)a later year if— May alter the interim target (2020, 2030,	The National Climate Objective under s.5 must be achieved “no later than the end of the year 2050“ This suggests there is flexibility for it to be achieved before

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
	(b) specify a different percentage for a particular year. All regulations produced under the Bill must be based on advice from the CCC, scientific knowledge and technology on climate change (cl.31).		to EU or international law and consultation with national authorities. (s.2 and s.3)	2040) percentages to higher or lower percentage Any alterations must be consistent with advice from the CCC, scientific knowledge about climate change or current international carbon reporting practice. (s.A1 and 2A)	2050. However, there is no detail on the ability to formally amend the National Objective.
Budgets	5 yearly carbon budgets which set a cap on GHG emissions over 5 years (Part 2). The NI departments are responsible for ensuring that budgets are not exceeded.	Carbon budgets set under 5 year CAP for all GHGs. Also includes budgets for nitrogen (similar to process used under s.8 Scottish 2019 Act). However, this is used as a tool to monitor nitrogen and its contribution to	5 yr budgets setting limits on the amount of greenhouse gas emissions for a particular 5 year period. (s.4 and 27) Advised by CCC, SoS decides and presents to Parliament.	Doesn't have 5 yr budgets. Has a longer term 40 yr (Fair and Safe) budget (2021-2050)[22]	5 year carbon budgets starting 2021 (s.6). Proposed by the Advisory Council, finalised by the Minister, approved by Oireachtas.

[22] Reducing emission in Scotland 2019 Progress Report to Parliament (CCC) P.19. https://www.theccc.org.uk/publication/reducing-emissions-in-scotland-2019-progress-report-to-parliament/

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
	Also sets the carbon accounting practices: timing for setting budgets, carry over etc.	achieving the overall target, it does not appear to set 5 year nitrogen budgets)[21].			**Sectoral emissions ceilings** Put a cap on emissions from each sector over 5 yr budget period (S.9(6C)). Relevant Ministers to account for their performance in achieving these before an Oireachtas Committee each year.
Delivery	Targets and budgets to be set under regulations made by DAERA, advised by CCC and approved by the Assembly.	CAP to achieve the overall 2045 target, through production of: • annual targets; • carbon budgets;	A climate action plan is not referred to, but s.14 requires the SoS to produce a report setting out proposals and policies for meeting the carbon budgets.	A strategic delivery plan (Climate Action Plan) on sector by sector policies and actions for meeting the overall target. To be published	Annual CAP detailing a roadmap of actions and measures for each sector in line with binding sectoral emission ceilings.

[21] For more information see: https://www.gov.scot/policies/climate-change/nitrogen-balance-sheet/

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
	No specific reference to a climate action plan. However, under c.16 DAERA is to produce a report on plans etc. to achieve budgets, to which departments are to provide details on their plans etc. And under cl 29, NI departments are to develop and implement plans, policies and strategies in relation to their duties. In performing their functions, all departments are to cooperate with one another.	• nitrogen budgets; • sectoral plans; and • adaptation programme under s.60 UK Act). To be prepared by Executive Office and approved by Assembly. First within 3 years of Bill enacted. Then every 5 years.	No specific mention of sectoral plans or policies, but SoS to report on implications for different sectors of the economy (s.14).	every 5 years. Provides for just transition principle (s.35 of 2019 Act). Does not set annual targets or carbon budgets, but refers to the actions and policies of the plan for achieving the overall and interim targets.	Minister to request each local authority to prepare a Climate Action Plan to include both mitigation and adaptation measures (cl.16).
Carbon units and accounting	Clauses 5-9 provide:	Carbon Budgets in the CAP will outline:	UK allows for the crediting and debiting of carbon units	2019 Act (Part 2) sets an annual limit on the amount of	There does not appear to be any provisions in the

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
	- An explanation of accounting definitions and methodologies. NI emissions are from NI sources (including international aviation and shipping), removals from LULUCF sector. - DAERA may provide for the crediting/debiting of carbon units as part of the total GHG emissions through regulations. - DAERA may set up a scheme for registering,	• The maximum annual carbon units purchased by DAERA that must not exceed 25% of the GHG reduction target for that year. • Will detail the annual GHG amount that will be removed via land-use or land-use change. • DAERA oversight of carbon tracking scheme.	to the net carbon account (s.27). The UK Government must set a limit on the number of international carbon units that can be credited for each budgetary period (s.11). Limit under 4th carbon budget (2023-2027) is 2.8% of the total carbon budget. It excludes use of credits from EU ETS (particularly for those in NI under the EU ETS).[23] Advice must be sought from the CCC (s.34). SoS may set up a scheme to register, track and keep accounts for transfer of carbon units. May use an existing scheme for this (s.26).	carbon units purchased by Ministers that can be credited towards the net Scottish emissions for a year (<20% of planned reduction in net emissions account for that year).	2021 Act in relation to carbon crediting, debiting, accounting or setting up of a tracking scheme.

[23] House of Lords Hansard 15 June 2021 https://hansard.parliament.uk/Lords/2021-06-15/debates/458B398F-7636-4FB2-8981-C600E23DFA54/ClimateChangeAct2008(CreditLimit)Order2021

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
	tracking and transfer of carbon units. May use an existing scheme (cl.10).				
Reporting	Sets 'minimum reporting requirements' to be prepared by DAERA and laid before the Assembly, which include: • Carbon budget implementation reports laying out proposals and policies to meet a budget (cl.16); • Interim progress reports on budget. All NI Departments to provide DAERA with progress on their areas of	Reporting to be carried out by the independent Climate Commissioner and Climate Office, laid before the Assembly, with a response to be made by the Executive Office: 1) Annual CAP reports by the Climate Commissioner (cl.4) must be laid before Assembly on meeting annual targets, budgets and implementing sectoral plans. 2) Act Review Reports (cl.9) by Climate Commissioner on the working, adequacy and effectiveness of the Bill.	Reporting carried out by the SoS and laid before Parliament: 1) An annual Statement each year on the amount of emissions and how this compares to previous years. 2) A final statement for each budgetary period to be laid within 2 years of the final budget period. 3) A final statement for 2050, by 2052. If target not met, must state why. 4) Impact report every 5 years giving risk	Reporting carried out by Scottish Ministers and laid before Scottish Parliament: • Each carbon year stating the amount, whether the target was met and the cumulative amount over the years and the fair and safe emissions budget (s.33 and s.34 of the 2009 Act as	Reporting carried out by Government and Minister, with consultation of Advisory Council on performance of their functions: producing budgets, sectoral emission ceiling, cap etc (Minister) and approval of them (Government).

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
	responsibility under the budget.(cl.17). • Final carbon budget statement reports – these state how well budget is met (cl.18); • 'Shortfall reports' stating how any shortfalls in meeting budgets will be met (cl.19); • Statements for interim target years and the long term 2050 target (cl.20); and • Reports on climate change duties by specified public	To be produced every 5 years or each Assembly term (cl.9).	assessment of climate change (s.56). 5) Adaptation Programme to address risks in Impact Report (s.58).	amended by s.18 2019 Act). • Climate change plan annual progress reports. However, if the Scottish Ministers consider that information is not available, then it is to be produced as soon as possible (s.35B). • report annually on progress implementing the adaptation programme (s.54).	

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
	bodies (cl.21) (see section below).				
Independent advice	A requirement to obtain independent but non-binding review of progress form the UK CCC, on meeting emissions reduction targets, carbon budgets, and implementation of adaptation programmes (cl21-27). DAERA must respond to the reports and each NI Department must provide information to the CCC. Cl.33 – 35 UK CCC gives advice on targets, budgets and the making of nay	CCC to give advice on annual targets, budgets and plans under CAP annual reports (cl.4(5c)). Other advisory bodies: • RoI Advisory Council, IPCC advice on emergency declaration (cl.1). • Part V bodies (north/south bodies) under NI Act, advice on transboundary element.(cl.3(10)) • SEM Committee on advice on sectoral plans impacting energy sector (cl.3(7i))	Advice on overall targets, budgets plans by the UK Climate Change Committee. CCC provides progress reports on: 1)Annual reports to parliament on progress towards the targets. To which the government must respond. (s.36) 2)A report to SoS giving advice on adaptation Impact Report (s.57) 3)Progress report on Adaptation Programme (s.59)	The CCC provides advice on overall targets, budgets, and plans. Conducts progress reviews every 2 years on the adaptation programme and lays it before Parliament (s.56)	The Climate Change Advisory Council is an independent advisory body established under the 2015 Act. The Council provides non-binding advice on plans and policies and now targets and budgets (amended by s.9 2021 Act). It reports annually and periodically on the RoI's progress on targets (s.12 of 2021 Act amending

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
	regulations under the Bill.				s.11-13 of 2015 Act).
Duty on public bodies	Cl 21 gives power for DAERA, through regulations, to require climate change reporting by public bodies. A "public body" means— (a) a person or body with functions of a public nature; (b) a person who is a statutory undertaker within the meaning of s.250 of the Planning Act (Northern Ireland) 2011.	No public body climate change duty. Voluntary approach to adaptation reporting by public bodies as required under UK Act 2008 (s.60) - cl.3 (3d).	Requires priority authorities to report, but has voluntary adaptation reporting by public bodies on climate adaptation[24]. The UK Government keeps a list of those that agree to report in each round (the latest to December 2021).	S.44 -46 of the Scottish 2009 Act requires public bodies considered 'major players'[25] to report on their adaptation and mitigation duties under the Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Order 2015.	Cl.15 Ministers can request public bodies to report on its performance in terms of measures used and progress made in performing its functions (including mitigation and adaptation) In the 2015 Act (s.15), public bodies have a general obligation to perform their functions consistently with the adaptation and

[24] Defra (2010) *Adaptation Reporting Power Frequently Asked Questions and Answers* (p.5 and 26) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/182636/report-faq-110126.pdf

[25] Accompanying guidance considers these Major Players to be bodies with large estates and/or staff numbers, high impact and influence, large expenditure, or an auditing or regulatory function, and suggests that these bodies should be ambitious in their action on climate change and seek to do more than others. See Scottish Gov Guidance: https://www.gov.scot/publications/public-bodies-climate-change-duties-putting-practice-guidance-required-part/

Provisions	Bill No.2	Bill No.1	UK Climate Act	Scottish Act	RoI Bill
					mitigation requirements of the various plans and strategies.
Enforcement, sanctions/fines powers	There does not appear to be any provision in relation to offences, fines/sanctions for not reaching emission targets.	There does not appear to be any provision in relation to offences, fines/sanctions for not reaching emission targets.	CCC describes the Act as placing a legal duty on the UK Government to reduce the UK's emissions[26]. However, there does not appear to be any power for enforcing sanctions or fines for not reaching emission targets under the Act. It provides for sanctions/ penalties and offences in relation to other areas, for example: a trading scheme (Part 3 Sch2), carrier bags charges (s77) and renewable transport fuel obligations (s78),	There does not appear to be any power for enforcing sanctions or fines for not reaching emission targets under the Act. Fixed penalty notices are provided in relation to carrier bags (s.88A).	There does not appear to be any provision in relation to offences, fines/sanctions for not reaching emission targets.

[26] UK CCC [online] A Legal Duty to Act https://www.theccc.org.uk/the-need-to-act/a-legal-duty-to-act/

Appendix 2: Observations and considerations

1 Targets

Similar to the CCC advice (2021), Bill No.2 provides for a net at least 82% reduction of GHGs by 2050. It is the only piece of legislation provided in the examples that requires an at least 82% reduction over net zero. However, the CCC advice suggests that a reduction of 82% across all GHGs requires net zero CO2 and a 42% reduction in methane over the period 2020-2050. However, Bill No.2 does not specify this.

Both Bill No.1 and RoI Act 2021 aim for net zero on all GHG by 2045 and 2050 respectively. While the face of the RoI Act 2021 does not explicitly mention net zero, the definition of a "climate neutral economy"[27] under the National Objective implies net zero. Ministerial and Government commentary on the Act also describe it as setting the path for net zero:

> *Today is a landmark day, as we turn climate ambition into law, and set out on a journey to net zero emissions.*[28]

The RoI's PfG Our Shared Future (2020), suggests it is the mechanism to deliver net zero 2050:

> *an average 7% per annum reduction in overall greenhouse gas emissions from 2021 to 2030 (a 51% reduction over the decade) and to achieving net zero emissions by 2050. The 2050 target will be set in law by the Climate Action Bill, which will be introduced in the Dáil within the first 100 days of government, alongside a newly established Climate Action Council. The Bill will define how five-year carbon budgets will be set.*[29]

Bill No.2, similar to the UK, Scottish Act and RoI (2021) Acts, provides for GHG related targets only. Bill No.1 is the only one to go further by providing specific targets for biodiversity, soil and water quality also.

Bill No.2 and the UK Act have similar baselines for GHGs of both 1990 (carbon, methane, nitrous oxide) and 1995 (f-gases etc). However, Bill No.1 has the same baseline of 1990 for all GHGs.

- **Is there a need to consider the rationale and reasons for this going forward for monitoring purposes?**

In terms of methane, as yet, none of the examples provide for a separate biogenic methane target similar to New Zealand under its Climate Change Response (Zero

[27] The RoI Act defines climate neutral economy as: "a sustainable economy and society where greenhouse gas emissions are balanced or exceeded by the removal of greenhouse gases" (s. 3)

[28] DECC(23 July 2021) Press release: Ireland's ambitious Climate Act signed into law https://www.gov.ie/en/press-release/9336b-irelands-ambitious-climate-act-signed-into-law/

[29] RoI PfG Our Shared Future (2020) https://www.gov.ie/en/publication/7e05d-programme-for-government-our-shared-future/

Carbon) Amendment Act 2019. Under the NZ act biogenic methane does not count towards its overall net zero 2050 target. The Biogenic methane target is a reduction of 24%-47% below 2017 levels by 2050 and 10% by 2030. (see RaISe paper ***Methane and Biogenic Methane - an overview*** (NIAR 175-21) s.6 for more detail).

The CCC 2021 advice does not suggest a separate target for methane/biogenic methane. However, the CCC suggests that methane should make a fair contribution towards the overall target of 42% reduction from 2020-2050. This is different to Bill No.1 which requires all GHG (including methane) to contribute to net zero by 2045.

Bill No.2, similar to the CCC advice, provides for methane to contribute to the overall 82%. However, unlike the CCC advice, it has not stated methane's specific contribution to the overall target.

The RoI Act 2021 does not provide for a separate methane (or biogenic methane) target. However, discussion around the inclusion of a separate target had been ongoing since the pre-legislative stage[30]. The CCC acknowledged ROI's consideration of a separate methane/bio methane target.[31] An amendment for accounting for biogenic methane separately under the overall objective, was made at the Dáil Report stage[32]. However, this was not included in the final enacted version. It remains to be seen what targets will be placed on sectors under the emissions ceilings.

2 Power of adjustment

The UK Act, Scottish Act and Bill No.2 allow for alteration of targets, albeit with slight differences, but more so than Bill No.1. The UK Act allows for the overall target percentage to be adjusted, but not the overall target year of 2050. It also allows the baseline years to be altered. The Scottish Act allows for the overall target year to be altered, but not net zero. Any change to percentages can only be made to the interim targets which must still deliver the overall net zero target.

Both the UK and Scottish Acts require changes through regulation to be based on the advice of UK CCC, developments in scientific understanding of climate change, changes to EU/international laws and practices etc.

Bill No.2 offers more flexibility by allowing for the overall target year and percentage to be altered, and allows for the baselines to be adjusted. Similar to the UK and Scottish Act, changes must be made through regulation based on UK CCC advice, scientific knowledge and technology on climate change (cl.31).

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[30] Oireachtas Joint Committee PLS Report https://www.oireachtas.ie/en/press-centre/press-releases/20201218-joint-committee-on-climate-action-launch-report-on-pre-legislative-scrutiny-on-the-draft-of-the-climate-action-and-low-carbon-development-amendment-bill-2020/ (p.12/13)

[31] See CCC (2020) Advice on the UK's Sixth Carbon Budget 2033-37 – implications for Northern Ireland (p.30). Available at https://www.theccc.org.uk/publication/sixth-carbon-budget/

[32] Oireachtas Report Stage (15 June) Amendment 35 https://data.oireachtas.ie/ie/oireachtas/bill/2021/39/dail/4/amendment/numberedList/eng/b39a21d-drnl.pdf

In comparison, Bill No.1 does not allow for the same degree of flexibility in the alteration of its 2045 target. It only allows for the 2045 target year to be brought forward (cl.2 (8)) through advice from the CCC and approval of the Assembly (Cl.2 (9)).

- **Does the power to amend emission targets under Bill No.2, allow for the 2050 target year to be brought forward or pushed back, and allow for its percentage reduction to be reduced? Does it allow for separate emissions targets?**
- **How important is the power of adjustment to keep targets in line with changing methodologies etc?** For example, we have already seen changes to emission reporting with the addition of peatlands, as seen in the latest Northern Ireland Greenhouse Gas Emissions 2019 (Appendix A) . UK and NI emissions reporting follow the IPCC methodologies and guidance[33]. According to the IPCC, the latest methodological update in 2019, provides:

  The 2019 Refinement provides supplementary methodologies to estimate sources that produce emissions of greenhouse gases and sinks that absorb these gases. It also addresses gaps in the science that were identified, new technologies and production processes have emerged, or for sources and sinks that were not included in the 2006 IPCC Guidelines.[34]

3 Carbon accounting

Bill No.2 (Part 1) provides information on methodologies around carbon accounting and emphasises that NI Emissions are only those from NI sources and removals are only those removed from the land use, land use change and forestry (LULUCF) sector in NI (however, definition of removals may be amended by DAERA cl.7)). Bill No.2 also provides DAERA with the power to make regulations to include international aviation and shipping emissions in NI's overall emissions (cl.8). It also provides powers for DAERA to determine when carbon units may or may not be debited or credited to the NI account (cl.9).

Bill No.1 does not appear to provide the same level of detail on methodologies. However, it provides a limit of 25% on carbon credits purchased by DAERA, and refers to removals from the LULUCF sector (similar to Bill No.2, but with no power to amend this).

Similar to Scotland and the UK Act, Bill No.2 provides for a tracking scheme with the options to be set up under an existing scheme. While Bill No.1 also provides for a tracking scheme, the use of an existing scheme is not provided as an option.

- **Similar to Bill No.1 and the UK Act, does Bill No.2 provide a limit on the purchase of international credits?**

[33] DAERA [online] Northern Ireland greenhouse gas inventory https://www.daera-ni.gov.uk/articles/northern-ireland-greenhouse-gas-inventory

[34]

- **And will this be per budgetary period (as under the UK Act)?**
- **Does Bill No.2, allow for the definition of net NI emissions to be altered to include both land use sector and engineered removals, particularly should science/technology develop over time? By contrast, Bill No.1 only accounts for removal by the land use sector under its carbon budget with no provision for amendment.**
- **Do both Bills provide for a different type of limit on the use of credits e.g. limits on their use towards the net amount under Bill No.2 (cl.9), and limits on their purchase by DAERA in Bill No.1?**
- **Bill No.2 does not allow credited units to offset other gases elsewhere, so as to avoid double counting. Does Bill No.1 have this precaution?**
- **Does DAERA have remit over international aviation and shipping – or is this purely for emission monitoring rather than regulatory purposes?**

4 Budgets

Similar to the UK Act and Bill No.1, Bill No.2 also provides for 5 year carbon budgets. Carbon budgets relate to all GHGs, not just carbon alone, similar to the UK Act, RoI Act and Bill No.1. The main difference is that Bill No.1 also provides for nitrogen budgets also whereas Bill No.2 does not. Bill No.2 allows for the carrying backwards and forwards of emissions from one budget period to the previous or next. However, it is not clear whether Bill No.1 provides for such adjustments. Both Bills require advice from the CCC with the setting of budgets. However, under Bill No.1, budgets are set under the CAP by the Executive Office, but they are set through regulations by DAERA under Bill No.2.

Bill No.2 also provides for carbon accounting practices such as carbon setting principles in line with overall and interim targets (cl13) and timing for setting budgets (cl.14). It also provides details on the ability to carry over from one budgetary period to another and the impacts this may have on budgets. This compares with Bill No.1, which does not appear to provide the same level of detail under cl.3 (5) in relation to the setting of budgets.

- **The development of NI specific budgets is a first for NI. What benchmarking exercises will be required/carried out for the development of budgets under secondary legislation in Bill No.2?**
- **Will benchmarking be done on a per department, sector and/or gas basis?**
- **How easy will it be to benchmark all gases, particularly those gases for which it is harder to capture data from all sources?**

5 Delivery

Bill No.1 provides for budgets, annual targets, sectoral plans to be set out under a climate action plan (CAP). UK and Scotland provide for a form of CAP, which provides for policy and plans for meeting budgets (UK Act s.14), but not the setting of binding targets similar to Bill No.1. The RoI Act 2021 is slightly different because its CAP is to be in line with binding sectoral emissions ceilings. The RoI Act 2021 also requires local authorities to prepare a local authority climate action plan (cl.16).

Bill No.2 does not appear to provide for a specific climate action plan (CAP) setting binding targets, similar to the CAP to be produced by the EO under Bill No1. Under Bill No.2, any budgets and targets are to be laid out under secondary legislation, rather than a CAP.

However, under Bill No.2, similar to the UK Act, DAERA must submit a report to the Assembly outlining the implementation of the carbon budget to include proposals and policies that will be taken forward by NI Government departments to meet a carbon budget. (cl16).

- **Is the report by DAERA on the implementation of the budgets similar to a CAP that provides for policies and plans (like the UK and Scottish Acts)?**
- **If not, will Bill No.2 provide for a form of CAP?**

Sectoral plans

Under their CAPs, most of the other jurisdictions and Bill No.1 produce sectoral plans which are policy based and don’t provide for binding sectoral targets. However, the UK Act is less specific in relation to the production of sectoral plans, with reference made to SoS reporting requirements on how budget policies and proposals will “affect different sectors of the economy” (S.14). The RoI appears to be the only jurisdiction providing binding sectoral targets, known as sectoral emissions ceilings, to which sectoral measures and actions under the CAP must align.

Bill No.2 does not refer to sectoral plans under a CAP, similar to those under Bill No.1. Instead it refers to plans, policies and strategies produced at departmental level. Under cl. 29, NI departments are to develop and implement plans, policies and strategies in relation to their duties and functions. And in performing their functions, all departments are to cooperate with one another (cl.29). Under the DAERA report in cl.16, each NI department is required to provide DAERA with detail on its proposals and policies within its areas of responsibility.

- **Is the duty on departments to produce and provide detail on their respective plans and policies (cl.16 and 29) considered a form of sectoral plan, similar to Bill No.1 and other jurisdictions?**

- **If not, will a form of sector plans or policies be produced to help meet the overall target?**
- **How will departments cooperate under the duty in cl.29? Through the production of an overall cross-departmental plan/policies/strategy? Or individual departmental ones?**

6 Responsibility

Bill No.2 is different from other examples in the table as it holds all NI Departments responsible for meeting the overall 2050 target, budgets and objectives of the Bill. While DAERA is responsible for producing targets, budgets and any alterations. Other UK jurisdictions hold Ministers (Scottish Acts) and SoS (UK Act) responsible for achieving and producing targets. Under the RoI Act 2021, the State and Government are responsible for achieving the “national transition objective” (cl.3) and the Minister is responsible for producing targets, carbon budgets, sectoral emission ceilings, CAP etc.

Bill No.1 requires budgets and targets to be produced under the CAP by the Executive Office, compared to DAERA under Bill No.2. Also, Bill No.1 is not clear about who is responsible and accountable for achieving targets, budgets, CAP etc.

Bill No.2 also specifically requires each NI Department to provide information to DAERA for reporting purposes. RoI also requires each Minister to give a progress report for their respective sector in relation to sector specific progress under the CAP.

- **Who is best placed and resourced to produce targets/budgets – Executive Office under Bill No.1 or DAERA under Bill No.2?**
- **Under Bill No.2 will some sectors be required to make more reductions than others?**
- **Will NI departments be held accountable for achieving targets and budgets under Bill No.2?**
- **Will departments be responsible for making sure sectors comply with targets?**
- **Will departments have powers to ensure sectors comply?**
- **What happens with sectors that cross cut a number of departments?**
- **Are the targets under both Bills enforceable in Court? What are the potential sanctions that could be brought?**

7 Enforcement

Similar to the other UK Acts, ROI Act and Bill No.1, Bill No.2 does not appear to provide any provisions for offences, fines or sanctions in relation to the enforcement of emissions targets under the Bill.

The CCC describes the UK Act as placing a legal duty on the UK Government for reducing GHG emissions in the UK[35]. However, questions have been raised in relation to the ability to enforce climate law in court.

For example, the Dutch Climate Act has an overall objective of 95% reduction in GHG emissions by 2050, with a supporting 2030 target of 49%. However, according to commentary on the Act, neither target constitutes an obligation that can be enforced in a court of law. They merely provide a political mandate for government, rather than being enforceable in the courts:

> *The explanatory memorandum thus explains that the hard binding target provides a clear signal to industry on the one hand but will not be legally enforceable in a court of law on the other. In other words, the target is meant to be binding on government, while accountability must be discussed in the political arena only, not in court.*[36]

- **Are there any offences, fines or sanctions to enforce targets under Bill No.2?**
- **Are targets enforceable through court?**
- **Is accountability for reaching targets, provided through reporting requirements, rather than enforcement measures?**
- **If so, how will this impact the ability of departments to ensure sectors comply, so as to meet their departmental duties under the Act?**

8 Reporting

Bill No.2 reporting is carried out by DAERA and laid before the Assembly. With the other UK jurisdictions, reporting is carried out by government, either SoS (UK Act) or Ministers (Scottish Act). In the RoI Act 2021, progress reporting is carried out by the Advisory Council, with respective Ministers including reviews of sectoral progress (s.12 of 2021 Act).

Bill No.1 is unique as it requires reporting to be carried out independently by the Climate Commissioner. However, Bill No.2 and the other UK jurisdictions require reporting to be carried out by government, with independent non-binding advice by the UK CCC. This is laid out clearly in Part 3 for DAERA and Part 4 for the CCC in Bill No.2.

Bill No.1 requires more frequent annual progress reporting and on a wider range of targets and budgets (e.g. biodiversity, soil and water quality, nitrogen) compared to the other examples. The RoI Act also requires annual progress reports by the Advisory

[35] UK CCC [online] A Legal Duty to Act https://www.theccc.org.uk/the-need-to-act/a-legal-duty-to-act/

[36] Van Der Veen and De Graaf (2020) Climate Litigation, Climate Act and Climate Agreement in the Netherlands (p.466) https://rgakdwebsitep.blob.core.windows.net/akdfiles/2753/Climate-Litigation-Climate-Act-and-Climate-Agreement-in-The-Netherlands.pdf

Council and annual statements by the Minister, but for GHGs only. However, the UK Act and Bill No.2 require progress reports in line with each 5 year budget period and 10 year target (2030, 2040, 2050).

Scotland also has annual targets, similar to Bill No.1. However, reports on each target year, by Scottish Ministers, are to be laid before the Parliament "*as soon as reasonably practicable after the information to be contained in the report becomes available*." (S.33). Also, annual targets are only for GHGs, and not GHGs, biodiversity, soil and water quality under Bill No.1

The RoI 2021 Act (s.15) also requires the Minister and sectoral Ministers, when requested, to appear before an Oireachtas committee each year to report on targets, budgets, CAP and how individual sectors have performed. The difference being that RoI sectors will have binding emissions ceilings targets to report against. The Oireachtas Committee may make recommendations to respective Ministers, to which the Minister must "consider" and respond in writing. However, this suggests the Committee recommendations are not binding and are left to the discretion of the Minister. None of the other examples, or NI Bills, appear to have a similar provision.

None of the other jurisdictions or Bill No.2, appear to have a similar legislative review and reporting requirement (by the Climate Commissioner) as provided under Bill No.1.

Bill No.2 has a reporting duty for public bodies, unlike Bill No.1, which is voluntary under s.60 of the UK Act 2008. (cl.3(3)) (see s.8 below).

- **Is progress reporting best carried out by an independent body (under Bill No.1) or by DAERA (under Bill No.2)?**
- **Do the benefits of independent reporting outweigh the costs of set up for an independent Commissioner?**
- **Would non-binding advice from the CCC under Bill No.2 be considered enough for objectivity?**
- **Will annual reporting on a wider range of targets (GHGs, nitrogen, biodiversity and soil and water quality) under Bill No.1 require more resources, expertise and costs, compared to reporting every budgetary period on GHGs only under Bill No.2?**
- **Will the CCC be best placed and resourced to provide advice on progress reports under Bill No.1 (annually and wide range of targets) or Bill No.2 (every budgetary period and GHGs only, similar to current roles in other jurisdictions)?**
- **Due to the duty on departments under Bill No.2, will monitoring and reporting be carried out per department, sector, or gas, or a combination?**
- **RoI has provision for the Minister and sectoral Ministers to appear before an Oireachtas committee to report annually, if requested. Would this extra level of reporting requirement be considered useful?**

- **Is there no form of legislative review report under Bill No.2, similar to Bill No.1?**
- **Will adaptation reporting, including by public bodies, supplement adaptation reporting requirements under the UK Act 2008?**

9 Public body duty

Bill No.2 provides the power for DAERA, through regulations, to require public bodies to report on their climate change duties, including adaptation and mitigation (cl 21). Scotland has a duty on public bodies considered ‘major players’ to report on adaptation and mitigation measures and progress[37]. In fact, its updated Climate Change Plan states:

> *Strengthened legislation requires public bodies to report on their targets for achieving zero direct emissions and reducing indirect emissions, and to report how spending aligns with emissions reduction[38].*

The RoI Acts (2015 and 2021) have the power for Ministers to request public bodies to report on their mitigation and adaptation progress and performance.

In the UK Act, certain priority authorities are required to report, but other public bodies, sectors and organisations may report voluntarily on adaptation[39]. The UK Government keeps a list of those that agree to report in each round (the latest to December 2021). Clause 3 (3) of Bill No.1 refers to adaptation reporting duties under s.60 of the UK Act which suggests it uses the same voluntary approach.

- **Under Bill No.2 public bodies are described as those with functions of a public nature; or s.250 of the Planning Act 2011.**
- **Will public bodies be identified under subsequent regulations, similar to “major players” under Scottish Act 2009 (s.44-6)?**

[37] Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Order 2015 https://www.legislation.gov.uk/ssi/2015/347/contents/made

[38] Scotland Climate Change Plan https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/documents/ (p.22)

[39] Defra (2010) *Adaptation Reporting Power Frequently Asked Questions and Answers* (p.5 and 26) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/182636/report-faq-110126.pdf

Appendix 3: Comparison of Climate Change Bill No.1 and Climate Change Bill No.2

The following table takes the main provisions from each NI Climate Change Bill and outlines some observations/differences. This is not a comprehensive list, but merely provides examples of some differences, and largely draws upon sections discussed in Appendix 1 and 2.

Provision	Climate Change Bill No.1	Climate Change Bill No.2	Observations
Targets	- NI to establish "a net-zero carbon, climate resilient and environmentally sustainable economy by the year 2045" - "net zero carbon" means: "a net reduction of greenhouse gas emissions by at least 100% from the 1990 baseline" - The year to achieve the objective can be brought forward through a resolution of the Assembly. - Annual targets for biodiversity, soil and water quality	- NI Departments to ensure NI emissions account for the year 2050 is at least 82% lower than the baseline - NI emissions account for the year 2040 is at least 69% lower than the baseline - NI emissions account for the year 2030 is at least 48% lower than the baseline - The year/target percentage can be revised through regulations made by DAERA (subject to UK/international law, science or technology or if the UK CCC has recommended it) (cl.4)	• Bill No.1 requires all GHGs to collectively contribute to net zero by 2045. No.2 Bill provides for a less stringent target for all GHGs to contribute to by 2050 • Both targets do not mean all GHGs must individually reach the target set, but must collectively contribute to it. • **Will some gases have to go further to make up for those that cannot?** • **In the case of Bill No.1, to achieve net zero collectively, could some gases have to go beyond zero to make up for those that can't get close enough to zero by 2045?** • Unlike Bill No.2, there do not appear to be any interim targets under Bill No.1. **Will these be provided under the annual targets?**

Provision	Climate Change Bill No.1	Climate Change Bill No.2	Observations
		- Baseline years: 1990 for carbon dioxide, methane and nitrous oxide, all other are 1995. - Through regulation DAERA may include international shipping and aviation as part of the overall emissions	• In Bill No.2, emissions targets (by year and amount) and baseline may be adjusted subject to UK/international law, science and technology, or advised by CCC. However, Bill No.1 does not allow for an adjustment, only the date brought forward (which must be consulted with CCC). • **How important is the power of adjustment and flexibility to keep targets in line with changing methodologies? For example, we have already seen a change to UK and NI emissions reporting with inclusion of peatlands[40], international aviation and shipping etc, with more changes to potentially come under IPCC methodologies (see Appendix 2 s.2 for more detail)** • Bill No.1 does not have interim targets, but a wide range of annual targets for biodiversity, soil and water quality and carbon and nitrogen budgets. Bill No.2 only has GHG targets and carbon budgets.

[40] DAERA (2021) NI GHG Inventory 1990-2019 Statistical Bulletin (p.18) https://www.daera-ni.gov.uk/sites/default/files/publications/daera/NI%20Greenhouse%20Gas%20Statistics%201990-2019_2.pdf

Provision	Climate Change Bill No.1	Climate Change Bill No.2	Observations
			• Baseline in Bill No.1 is 1990 for all GHGs, whereas Bill No.2, similar to the UK Act is 1990 for CO2, methane, nitrous oxide and 1995 for all others. **Differences in baselines need to be clarified, especially for ensuring consistent monitoring, reporting and comparison purposes.**
Responsibility	The EO is to produce and lay the CAP before the Assembly (cl.3) and the Climate Commissioner is to report on them annually (cl.4 and 9) But the Bill does not explicitly say who is responsible for achieving the target and to be held accountable. There does not appear to be any form of enforcement of targets through offences, fines/sanctions etc	DAERA responsible for setting Carbon Budgets, reporting on progress and consulting with the CCC. Responsibility to achieve the overall target and interim targets (cl.1-3) and budgets (cl.12) is on all NI departments. There does not appear to be any form of enforcement of targets through offences, fines/sanctions etc	• Bill No.2 clearly defines that NI Departments are responsible for achieving targets and budgets. • However, Bill No.1 is not as clear in this regard. • Are there any offences, fines or sanctions to enforce targets under both Bills? • Are targets enforceable through court? • Is accountability for reaching targets, provided through reporting requirements, rather than enforcement measures? • If so, under Bill No.2, how will this impact the ability of departments to ensure sectors

Provision	Climate Change Bill No.1	Climate Change Bill No.2	Observations
			comply, so as to meet their departmental duties under the Act?
Delivery mechanism	Climate Action Plans (CAPS) must be developed and laid before the Assembly setting out how the objective will be delivered through targets (annual) and measures (budgets). 1st CAP within 3 years of Bill and every 5 years thereafter CAPs must be subject to consultation and Assembly approval CAPs will include the following targets and measures: (1) Mean Annual Targets in relation to net GHG emissions, water quality, soil quality and biodiversity (2) carbon budgets, (3) Nitrogen Budgets – each CAP must have nitrogen use	Carbon Budgets set by DAERA, through regulations, set maximum total net emissions for each budgetary period- 2023-27 and each 5-year period thereafter. The first 3 carbon budgets must be set by end of 2023. All budgets to be in line with the 2050 and interim targets. The carrying of amounts from one budget period to another is allowed. Amounts can be carried back (<1%) or unused can be carried forward to another budget period. DAERA must submit a report to the Assembly outlining the implementation of the carbon budget to include proposals and policies that will be taken forward by NI Government	• Bill No.1 uses a CAP to deliver its targets and budgets, whereas Bill No.2 does this through regulations. • The range of targets under the CAP in Bill No.1 is much wider compered to Bill No.2 (beyond GHGs, Bill No.1 also includes biodiversity, soil and water quality and nitrogen) • Bill No.2 refers to a report by DAERA on the proposals and policies in relation to individual Departments to reach a budget – **is this considered similar to sectoral plans under the CAP in Bill No.1?** • And under cl 29 of Bill No.2, NI departments are to develop and implement plans, policies and strategies in relation to their duties. And provide details of these to DAERA for the report under cl.16. **Is this similar to**

Provision	Climate Change Bill No.1	Climate Change Bill No.2	Observations
	efficiency for NI and annual targets in line with this. This is the ratio of nitrogen removed compared to nitrogen added in agri-food, transport and energy sectors (4) Sectoral Plans set out policies and proposals across different economic sectors to meet the objective	Departments to meet a carbon budget. (cl16) All NI Departments are responsible for ensuring budgets are not exceeded and under cl 29, NI departments are to develop and implement plans, policies and strategies in relation to their duties.	**sectoral plans under Bill No.1, but at department level?**
Carbon accounting and units	- Carbon Budgets in the CAP will outline the maximum annual carbon units purchased by DAERA that must not exceed 25% of the GHG reduction target for that year - Will detail the annual GHG amount that will be removed via land-use or land-use change - DAERA oversight of carbon tracking scheme	- Provides meaning of different terminologies so as to clarify carbon accounting practices and the determination of emissions (C..5-7) - Removals are associated with nature- based removals, but DAERA has power to amend definition to allow for engineered approaches in the future (cl.7) - (Cl.9) DAERA may provide for the crediting/debiting of carbon units	• Bill No.2 appears to provide more detail and explanation of accounting methodologies compared to Bill No.1. • Bill No.2, allows for definition of net NI emissions to be altered to include engineered removal, whereas Bill No.1 appears to only account for removal by the land use sector under its carbon budget. • Both Bills provide for the crediting/debiting of carbon units. This includes a limit on their use towards the net amount under Bill No.2 (cl.9), and limits on their purchase by DAERA in Bill No.1.

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		as part of the total GHG emissions through regulations. - Credited carbon units cannot be used to offset other GHGs - DAERA may limit the use of carbon units to reduce the overall emissions account. - DAERA may through regulations provide for a scheme to register and track carbon units (cl.10)	• Bill No.2 does not allow credited units to offset other gases elsewhere, so as to avoid double counting. Bill No.1 does not appear to have this precaution. • Both Bills provide for a tracking scheme. However, similar to other UK jurisdictions, Bill No.2 allows for this to be set up under an existing scheme by DAERA. Bill No.1 does not appear to have this as an option. **Could the setup of a separate new scheme under Bill No.1 incur more costs?**
Reporting	- Annual CAP reports by the Climate Commissioner (cl.4) must be laid before Assembly on meeting annual targets, budgets and implementing sectoral plans. - Recommendations must be made if any targets/measures are missed or underperforming	DAERA must prepare and lay before the Assembly: • Interim progress reports on budget within 3 years of a budget period. All NI departments to provide DAERA with progress on their areas of responsibility under the budget.(cl.17)	• Bill No.1 provides for independent progress reporting, whereas under Bill No.2 it is conducted by DAERA. • Both Bills require non-binding independent advice on their progress reports from the CCC (and others under Bill No.1) • **Is progress reporting best carried out internally or independently?**

Provision	Climate Change Bill No.1	Climate Change Bill No.2	Observations
	- Act Review Reports (c.l9) by Climate Commissioner on the working, adequacy and effectiveness of the Bill. To be produced every 5 years or each Assembly term (cl.9).	• Final carbon budget statement reports within 2 years of the end of a budgetary period – these state how well budget is met (cl.18); • 'shortfall reports' stating how any shortfalls in meeting budgets will be met (cl.19); • Statements for interim target years and the long term 2050 target within 2 years after each target date (cl.20); and • Reports on climate change duties by specified public bodies (cl.21)(see section below)	• **Do the benefits of independent reporting outweigh the costs of set up for an independent Commissioner?** • **Would non-binding advice from the CCC under Bill No.2 be considered enough for objectivity?** • Bill No.1 requires reporting on a wider range of targets and budgets compared to Bill No.2. • Bill No.1 requires more frequent progress reports (e.g. annual CAP reports compared to 5 year budget and 10 yr target reporting under Bill.No.2). • More frequent reporting may be regarded as a positive step. **However, practicality wise, will NI Commissioner (and CCC who is to give advice) have the adequate resources and expertise for this? Will this require more costs, beyond what DAERA already does and is required to do under Bill No.2?** • Bill No.1 has provision for legislative review of the Act by the Climate Commissioner.

Provision	Climate Change Bill No.1	Climate Change Bill No.2	Observations
			However, Bill No.2 does not appear to have such a provision. • **Will adaptation reporting, including by public bodies, supplement adaptation reporting requirements under the UK Act 2008?**
Independent advice	CAP progress report to be carried out by the Climate Commissioner (cl.4) (see above). Non-binding independent advice to be sought from the CCC and other listed bodies as follows: - CCC to give advice on annual targets, budgets and plans set under the CAP report (4(5c)). Cl.13? - Other advisory bodies identified: • RoI Advisory Council, IPCC advice on emergency declaration.	A requirement on DAERA (under Part 4) to obtain independent but non-binding review of progress from the CCC on meeting emissions reduction targets, carbon budgets, and implementation of adaptation programmes: Reports from the CCC are to be provided within 6 months of: - DAERA's final budget statements (s.18) which are to be laid within 2 years after each budgetary period, suggesting a CCC report every 7.5 years. - compliance statements on targets (s.20) which are to be laid within 2 years after each target date,	• CCC to provide independent advice for both Bills. However, Bill No.1 does not require CCC advice for the overall 2045 objective, only annual targets, budgets, and plans under the CAP. • Whereas Bill No.2 requires advice and progress reports from the CCC in relation to the 2050 target, interim target and budgets (Part 4). • **Would independent advice on all targets, including the overall target, be considered best practice?** • Bill No.1 requires advice from CCC and other listed bodies. Bill No.2 only requires advice from the CCC**. Would the addition of advice from other bodies under Bill No.2,**

Provision	Climate Change Bill No.1	Climate Change Bill No.2	Observations
	• Part V bodies (north/south bodies) under NI Act, advice on transboundary element SEM Committee on advice on sectoral plans impacting energy sector	suggesting a CCC report every 10 years. CCC to provide report on implementation of adaptation programmes (in line with s.60 of UK Act) (cl.27)	**particularly in relation to transboundary issues, be considered best practice?** • The role of the CCC under Bill No.2 is more similar to the other UK jurisdictions, compared to Bill No.1. Bill No.1 requires the CCC to provide more frequent advice and on a wider range of targets and budgets. **Does the CCC have the resources and capacity to meet the requirements under Bill No.1, compared to Bill No.2?**
Public Bodies	Clause 3 (3) of this Bill refers to adaptation reporting under s.60 of the UK Act which uses a voluntary approach to reporting, therefore implying that public body reporting is also voluntary under this Bill.	Duty on public bodies to report on climate change duties, which include mitigation and adaptation (cl.21)	• Bill No.1 suggests reporting by public bodies on a voluntary basis • Bill No.2 requires statutory mitigation and adaptation reporting by public bodies (those with functions of a public nature; or s.250 of Panning Act 2011). • **Will public bodies be identified under subsequent regulations, similar to "major players" under Scottish Act 2009 (s.44-6)?**

Provision	Climate Change Bill No.1	Climate Change Bill No.2	Observations
Just transition	Sectoral plans (cl.3 (8)), as set out in the CAPs, must: • Support growth of jobs that are climate resilient and environmentally and socially sustainable • Support net-zero carbon investment and infrastructure • Create work which is high-value, fair and sustainable • Reduce inequality • Reduce, with a view to eliminating, poverty and social deprivation	Cl.16 refers to reports including NI Departments' responsibilities, policies and proposals for reaching budgets. However, there is no mention of just transition principles here.	• Bill No.1 lists principles referred to in the EFM as Just transition in relation to the making of sectoral plans. • However, there is no further detail on the face of the Bill in relation to how these principles are to be implemented, measured and who will be held accountable for their delivery. • Similar provisions or terminology to Bill No.1 does not appear to be used in Bill No.2. • **Are just transition principles written into the provisions under Bill No.2?** • **Could just transition principles, as they're applied under the Scottish Act in relation to its CAP and sectoral plans, be provided in secondary regulations in relation to departmental reports on achieving budgets (cl.16) or departmental plans and policies (cl.29)?**
Transboundary	Cl, 3 (9) requires carbon and nitrogen budgets to consider the transboundary element (any negative impact on NI environment	There does not appear to be a similar provision for transboundary element in Bill No.2	• Bill No.1 has a transboundary element, however Bill No.2 does not appear to have a similarly worded provision.

Provision	Climate Change Bill No.1	Climate Change Bill No.2	Observations
	from activities in RoI, Scotland, England and Wales)		• In fact, the RoI Act 2021 does not have a similar transboundary or cross border element. • **Does the lack of a similar provision in RoI, mean that any transboundary impact is a one-way consideration?** • **How will both Bills ensure co-operation and consideration of cross border impacts is a two-way process?** • Currently, neither Bill exactly lines up with the RoI Act[41]. Bill No.1 is aiming for net zero 5 years earlier. • However, could this result in measures that are more stringent across sectors? • Bill No.2 is aiming for the same year, but with a lower reduction of 82% from all GHGs. • However, the level of difference will not be known until sector emission ceilings are produced under the RoI Act and individual

[41] Currently aiming for net zero under its 2050 national objective (See methane paper). However, according to the CCC (2020) the ROI's Climate Change Advisory Council 'Annual Review 2020' specifically recommends seeking EU agreement to creating a split national target for 2050: net-zero emissions of long-lived greenhouse gases and anthropogenic methane, with a separate, longer target for biogenic methane. In fact an amendment (no.35) to make a separate account for biogenic methane (methane emissions from agriculture sector (amendment 11)) under the national objective was tabled Report Stage (15 June 2021) but did not make it into the final enacted piece of legislation.

Provision	Climate Change Bill No.1	Climate Change Bill No.2	Observations
			gas contributions to the overall target under both Bills.
Economic Impact	No specific economic impact. The EFM states that an estimate of the costs of the Bill, including its implementation and setup of a Climate Commissioner and Office, was not possible to provide. The CCC (April 2021) provides the closest estimations to this target, for net zero by 2050, instead of 2045. It predicts that: - an extra £900 million per year to 2050, on top of the costs for achieving 82%, would be required if removal technologies are used (the CCC debates in its 2020 letter whether NI would be suitable for these). - to reach net zero 2050 would require a 50% reduction in output from NI's livestock sector	EFM states that it is difficult to accurately quantify costs at this stage: *Precisely where and when costs of implementation of the Bill will fall and how they will impact on output by each Northern Ireland sector and department will depend upon the pathways and policies chosen to deliver the emissions reductions required by the Bill. The Bill however, does not state what those pathways and policies should be.* However, it states the following overall estimations and projections taken from the UK CCC advice: - Estimated indicative net cost of the Bill from 2022-2050 is around £4bn	• Both Bills are unable to provide specific sectoral costs of implementation of the Bill. • However, Bill No.2 does provide overall estimations and projections, while Bill No.1 does not. • The projections in the EFM to Bill No.2 are taken from the CCC advice (April 2021). • **Are these the projected costs for meeting the suggestions of a balanced pathway approach by the CCC i.e. 82% GHGs (with methane reduced by 42% 2020-2050) and net zero carbon dioxide, compared to 82% all GHGs by 2050 under Bill No.2?** • **Would DAERA expect there to be a difference in costs between Bill No.2 proposals and the CCC balanced pathway approach?** • The CCC also provides estimations for reaching net zero by 2050, but not 2045 as provided under Bill No.1. Therefore, the extra

Provision	Climate Change Bill No.1	Climate Change Bill No.2	Observations
	The UFU commissioned research by KPMG, published August 2021. It assessed the impacts of Bill No.1 on the agricultural sector in NI. Rather than just specifically looking at the costs, it considered the potential economic loss and suggested that total economic output would fall by between 8 – 66% across the agri sectors analysed, with dairy and beef hit the hardest.[42]	- Projected annual investment needs of £1-1.5bn from 2030 onwards. (Particularly for low carbon power, retrofit of buildings batteries and infrastructure for e-vehicles.) - To deliver same services with lower emissions - additional net revenue need of £300m /yr peaking in early 2030s. - Resource costs projected - <1% of 2018 GDP each year to 2050. Rural Impact Assessment completed that shows likely significant impact on rural communities and therefore net zero emissions target have been set, in line with UKCCC, to mitigate any disproportionate adverse impact on NI agri-food	£900million per year, on top the estimation for reaching 82%, may be even more for net zero 2045. • The recent impact assessment for Bill No.1 was commissioned by the UFU and conducted by KPMG (August 2021). • While there may be different opinions on the findings of this report, as yet, it is the only report produced that provides a sector level impact assessment specific to NI. • However, it only covers the agri sector. And it is quite clear that under both Bills, all sectors across NI will impacted.

[42] KPMG (August 2021) Climate Change Bill Impact Assessment https://content17.co.uk/media/99/images/full/Climate-Bill-Impact-Assessment-Final-Report_1.pdf (see p.5 headline figures).

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Consultation	EFM refers to an opinion poll conducted in February 2020 and published summer 2020. Results showed support for a climate Act in NI with a target for net zero by 2045 (with 68% of respondents in agreement). Clause 2 (4) states that CAPs will undergo a 16 week consultation by the EO.	Consulted on policy proposals for a Climate Change Bill from 8 Dec 2020 to 1 Feb 2021 "Discussion Document on a Climate Change Bill for Northern Ireland". NISRA conducted a quantitative and qualitative analysis. Received 269 responses: - 48% preferred a Bill with targets to contribute to UK 2050 - 40% in favour of net zero 2050 - 12% not sure/no opinion - Most supported ability to adjust targets and public body reporting	• Bill No.2 conducted a formal consultation on the main Bill proposals, whereas Bill No.1 refers to an opinion poll. • Both Bills to conduct further consultation on CAPs (under Bill No.1) and budgets (Bill.No.2).
RIA/Rural proofing	No form of RIA or rural proofing exercise performed during development of the Bill.	**RIA** Partial RIA conducted to estimate costs and benefits of the Bill. Specific impacts will be assessed once measures and policies for delivery of targets and budgets are produced for each budget period, subject to consultation.	• Bill No.2 has conducted a partial RIA and Rural Needs Impact Assessment. • The RIA to Bill No.2 refers to impacts at the UK level from the CCC and global level from the Stern Review, with very little reference to specific impacts at NI level. • The EFM to Bill No.2 states, further RIA and rural needs assessments will be required

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		All secondary legislation will be subject to a cost RIA and other assessments. Refers to costs versus benefits of addressing climate change according to the CCC at UK level and the Stern Review on the Economics of Climate Change **Rural proofing** Rural Needs Impact Assessment carried out, but full impacts will be determined once policies and approaches are produced. However, the EFM states there are likely to be impacts on the rural and agri sector due to efforts to reduce emissions. e.g. behavioural change towards farming practices, land use and output changes through reduced livestock numbers.	once more specific polices and measures are produced. • **Will the 82% reduction under Bill No.2 require disproportionate reductions of gases and across sectors?** • Bill No.1 was not subjected to an RIA at the Bill development stage. The Bill states that CAPs will undergo consultation (cl.3), but no mention of RIA or rural proofing. • As detailed above, KPMG, on behalf of the UFU, produced an impact assessment on agri sector for Bill No.1. • However, producers of both Bills do not appear to have provided impact assessments on each individual sector.