

Today we act.  
Tomorrow  
we thrive.



Northern Ireland  
Executive

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**Draft Green Growth Strategy  
for Northern Ireland**



# Contents

<b>Executive Forward</b>	2
<b>Executive Commitments</b>	6
- Responding to the consultation	8
Why are we consulting?	8
How to respond to the public consultation	8
What happens after the public consultation	9
<b>1. Re-imagining Our Future</b>	
- Looking through a new lens	12
- Our vision for 2050 and our principles	14
- Embracing change	16
- Developing the strategy	17
<b>2. Balancing Climate, Environment and Green Jobs</b>	
- Why a Green Growth approach	24
- Taking action on climate	24
- Delivering a resilient environment	25
- Developing a green economy	26
- Embedding Green Growth	28
<b>3. Pathway to a Low Emissions Society</b>	
- Climate change bills	32
- Where are we now?	33
- The pathway to UK Net Zero	35
- The pathway for Northern Ireland	36
- The scale of change required	38
- Developing a Climate Action Plan	40
<b>4. Transition in the Right Way</b>	
- Ensuring a just transition	44
- Engagement and changing behaviour	46
- Evidence based decision making	48
<b>5. From Policy to Delivery</b>	
- Enabling delivery	52
- Investing in innovation, technology and skills	52
- Providing leadership	54
- Working in partnership across governments	59
- Investment and funding	62
<b>6. Measuring and Monitoring Our Progress</b>	
- Measuring progress	68
- Governance and monitoring	69
<b>7. Next Steps</b>	
- Annex 1: Glossary	78
- Annex 2: CCC Sectors	82

## Executive Foreword

**Across the world, there is recognition that continuing to meet consumption by traditional methods is having a damaging impact on our environment. The necessity to change is evident and the Northern Ireland Executive must respond.**

**We are committed to tackling climate change head on and this is what we intend to do, together. This is not something we take lightly - action must be taken now if we are to succeed, not just for future generations, but for today.**

Climate change is resulting in extreme weather events and increasingly having a devastating impact on people's lives. Without biodiversity, we put at risk our health and prosperity along with nature's ability to deal with climate change. This decade, the 2020s, must be a decade of urgent action. Collectively we must lay the foundations for a more sustainable society before irreparable damage is done. There is still time to make a difference.

In Northern Ireland, we have a rich history of leading the world in innovation; from the early days of ship building to recently in advanced manufacturing and financial technology. We have an opportunity to embrace our world famous innovation, by looking at how we can do things differently, more efficiently within a circular economy and ultimately better for our environment. Some may consider taking carbon out of the economy as a threat, however, there are many opportunities and Northern Ireland is particularly well placed to avail of these. Through innovation, research and development and investment we can lay the foundations for a green revolution, the next industrial revolution which can rejuvenate our economy following the Covid-19 crisis.

Today, the world is looking on as we lead the way with our innovation in hydrogen; and this is only the beginning of what we can achieve. There is so much more we can do through creatively re-imagining how we heat our homes, travel, work, and even source our food. Our ability and readiness to improve our carbon efficiency will over time, create new income streams and lessen our demand for fossil fuels. We also need to take individual responsibility and consider how our own actions impact the environment around us.

Radical change is required given the threats posed by climate change. To achieve our ambitions for Green Growth will mean we must prioritise aligned outcomes. Based on external factors as well as our own actions our economy will change and some sectors and their associated jobs are unlikely to exist in the future. Equally, however, new opportunities are already and will continue to emerge.



This Green Growth Strategy is about making sure we take advantage of these in a balanced and thoughtful way, creating more green jobs, and protecting and repurposing existing jobs where possible.

Climate change legislation is a fundamental part of tackling climate action and we, as Executive Ministers, plan to lead the way. We recognise we must change how we govern and this means changing how we spend our budgets. It will require significant long term investment from the public and private sector as we work together to adapt to our new and changing priorities.

We are adopting a Green Growth approach: bringing conversations about the economy, the environment and climate crisis together to show the benefits of tackling it collectively. In doing this we are aligning with the UN Leaders' Pledge for Nature,<sup>1</sup> which commits signatories, including the UK, to putting nature and biodiversity on a path to recovery by 2030. It also focuses on the role of nature based solutions, well recognised as a key means of delivering climate mitigation and adaptation outcomes.

We also will ensure that the transition to a more sustainable economy is fair and just for everyone.

This draft Strategy establishes our Green Growth vision and principles and sets out our commitments to tackling the climate crisis. A detailed Climate Action Plan is currently being developed, which will set out what we will do to deliver.

We are committed to making a difference and we call on everyone in our community to join us as we embrace this opportunity to do things differently across all sectors. This strategy provides the overarching framework that brings together existing strategies and policies of government that supports the delivery of climate action, for example, the Energy Strategy.


This draft Green Growth Strategy is your opportunity to help us on our journey to a future where Northern Ireland transitions from being a high to a low emissions society; where we can enjoy the longer term economic, social, health and environmental benefits that this brings. One in which society enjoys a low carbon, nature rich future reaping the advantages from jobs in the expanding green sector and consequent health and wellbeing advantages. The road ahead may not be easy. There will undoubtedly be challenges but we must overcome them if we are to make a lasting difference.

We urge you to review this strategy and have your say on Northern Ireland's Green Growth approach. Your views and knowledge are vital and we want to hear them.

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<sup>1</sup> UN Leaders Pledge for Nature (September 2020 ([www.leaderspledgefornature.org](http://www.leaderspledgefornature.org)))





**We can.  
We will.  
We must.**







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**Minister  
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**Minister  
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**Minister  
Nichola Mallon**  
Department for  
Infrastructure



**Minister  
Deirdre Hargey**  
Department for  
Communities



**Minister  
Robin Swann**  
Department of Health

## 10 Executive Commitments

1

### *EMBEDDING GREEN GROWTH*

We will ensure that Green Growth is central to all our policy and budgetary decisions by introducing a statutory Green Growth test and making Green Growth a budgetary priority.

2

### *LEGISLATING FOR CHANGE*

We will introduce legislation for reducing greenhouse gas emissions consistent with the UK's ambition to achieve net zero by 2050 and, to deliver upon this, we will develop clear targets and pathways in a Climate Action Plan from 2022.

3

### *A FAIR TRANSITION*

We will ensure that the transition we make will be a "Just Transition", fair for all our citizens, and we will establish a Just Transition Commission in 2022.

4

### *PEOPLE FIRST*

We commit to putting citizens at the heart of our Green Growth policy development and delivery by ensuring ongoing engagement with young people and other key groups, including a Citizen Assembly Panel.

5

### *SUPPORTING BEHAVIOURAL CHANGE*

We will promote behavioural change by providing low carbon options, infrastructure, timely information, advice and support to citizens and businesses to enable them to make informed choices on the transition to a low emissions economy.



6

***EVIDENCE BASED DECISION MAKING***

We will ensure our decisions and actions associated with the transition to low emissions, green jobs and a clean environment are underpinned by robust and timely evidence and science.

7

***INVESTING IN GREEN GROWTH***

We will transform our economy by working proactively with businesses, communities and all parts of government to maximise funding and investment opportunities for Green Growth and promote innovation, skills, research and technology.

8

***LEADING BY EXAMPLE***

We will provide public sector leadership by delivering a government estate and fleet with net zero operational carbon emissions and ensure a Green Growth aligned procurement strategy for all government spend.

9

***WORKING WITH OTHERS***

We will commit to ensure all government departments and the wider public sector work together to maximise our decarbonisation efforts, and will work in partnership with our neighbours across UK regions and the Republic of Ireland.

10

***MEASURING PROGRESS***

We will ensure sound governance and reporting arrangements for the delivery of the Green Growth Strategy and Climate Action Plan by recommending that the Assembly establish a Standing Committee on Climate Action and agree a monitoring framework for measuring progress.

## Responding to the consultation

### WHY WE ARE CONSULTING

We are facing a climate emergency and we know we need to act, and act quickly. This Green Growth Strategy sets out an ambitious vision and a framework for delivery with which all other NI government policies and strategies must align. It provides us with a vitally important **opportunity to embed wider climate change, a green economy and environmental considerations into decision making**. This will ensure that new policies and programmes align with the need to address climate change, develop green jobs and address biodiversity commitments, thereby delivering on the stated commitment<sup>2</sup> **“to ensure climate action and environment responsibility is at the heart of all government policy making.”**

Extensive engagement with organisations and individuals has taken place to prepare this draft Green Growth Strategy. However, we need to ensure our thinking is sound. We want you to tell us what you think of our assessment of the situation, what needs to change, and the commitments and infrastructure needs and priorities going forward.

### HOW TO RESPOND TO THE CONSULTATION

You can respond to this consultation online through our survey on Citizen Space, <https://www.daera-ni.gov.uk/consultations/consultation-green-growth-strategy-northern-ireland>. The survey is quick and simple to complete and seeks views on our vision, principles, proposed approach, delivery and monitoring. If you are unable to complete the survey online please contact the Green Growth coordination team by email:

[GreenGrowthFeedback@daera-ni.gov.uk](mailto:GreenGrowthFeedback@daera-ni.gov.uk)

An easy read version of the consultation document is available online but if you need documents to be provided in an alternative format, please let us know.

Responses to this consultation are invited until **11.59pm on 21st December 2021**.

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<sup>2</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/856998/2020-01-08\\_a\\_new\\_decade\\_\\_a\\_new\\_approach.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/856998/2020-01-08_a_new_decade__a_new_approach.pdf)

We look forward to hearing from you and are keen to engage with you. If you would like to speak to a member of the team about the Green Growth Strategy or the approach being taken, or if you or a group you are involved with would like to participate in a consultation please let us know.

### **WHAT HAPPENS AFTER THE PUBLIC CONSULTATION**

The consultation on the draft Green Growth Strategy closes on 21st December 2021. Following consideration of all responses, a full analysis report will be published on DAERA's website.



**Re-imagining  
our future.**



# 1



## Looking through a new lens

**Green Growth for us means recognising and accepting the impact we have on our planet and doing something about it.**

The climate crisis and environmental challenges we face are symptoms of a global economy and a society built on fossil fuels and the unsustainable use of natural resources. It cannot remain so if we want to secure a healthy home for future generations.

The findings of the 2021 landmark UN report on the science of climate action are unequivocal - **climate change is widespread, rapid and intensifying and responsibility rests with us.**<sup>3</sup>

We recognise the urgency of moving to mitigate the worst impacts of climate change. This Green Growth Strategy is about doing this; **looking through a new lens as we re-imagine our future.** As a society we have a duty to take action now or future generations will be left counting the costs. This moral responsibility to tackle these issues forces us to make judgements about the sort of world we want to live in. The transition we have to make will not be easy, but it is necessary and needs to be done fairly bringing everyone with us.

**‘Homo sapiens, the wise human being, must now learn from its mistakes and live up to its name. We who are alive today have the formidable task of making sure that our species does so. We must not give up hope.**

**We have all the tools we need... and an ability, perhaps unique among all living creatures, to imagine a future and work towards achieving it.’**

David Attenborough – A life on our planet

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<sup>3</sup>Sixth Assessment Report (ipcc.ch)



**In February 2020, the Northern Ireland Assembly declared a climate emergency.**<sup>4</sup> Increasing frequency and severity of weather events present an important reminder of the need for climate change adaptation (i.e. preparing for the impacts of climate change) to work alongside climate change mitigation measures (i.e. emissions reductions)<sup>5</sup> as well as measures to restore our natural environment. We recognise that despite the efforts made to tackle it, pollution remains a problem for us here. Our consumption of natural resources and the waste streams we produce are not sustainable. Current practice is not going far enough to deliver the improvements needed in air and water quality to restore habitats and ecosystems and allow biodiversity to flourish. A clean and resilient environment is not just nice to look at; it is essential for our health and wellbeing and our ability to adapt to the effects of climate change.<sup>6</sup> We must change how we consider nature in economic decision making, recognising its true value. We must utilise better what we think of as waste through a strong circular economy, an economy where we move from “make, use, dispose” to one where we keep resources in use for as long as possible, where waste is eliminated, resources are circulated and nature regenerated.

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<sup>4</sup> <http://aims.niassembly.gov.uk/plenary/details.aspx?tbv=0&ptv=0&mcv=0&mtv=0&sp=0&spv=-1&per=1&it=0&pid=2&sid=p&pn=0&ba=1&doc=290756%20&fd=03/02/2020&td=03/02/2020>

<sup>5</sup> The UK Climate Change Committee in their recent progress report to the UK Government highlighted the importance of climate change adaptation measures needing to work alongside climate mitigation measures if we are to successfully achieve UK Net Zero by 2050.

<sup>6</sup> Call for emergency action to limit global temperature increases, restore biodiversity, and protect health - The Lancet

## Our vision for 2050 and our principles

### OUR VISION FOR 2050

“Northern Ireland has taken significant action for the climate and our environment, has placed nature and biodiversity on a path to recovery, and moved from a high to a low emissions society.

We have made this change fairly and have demonstrated a responsibility for each other and for the place in which we live.

As a result of all our efforts, we have a more resilient environment with a healthy ecosystem and a strong sustainable economy. More people are employed in green jobs and all generations benefit from improved wellbeing.”

Commitments in the UK and around the world such as the UN Sustainable Development Goals, the United Nations’ Paris Climate Agreement to limit global warming this century to well below 2°C, the UK Government’s target of net zero carbon emissions by 2050, and its recent proposals to ensure the protection of nature is rooted in our policy, economic and financial decision-making, are setting the direction we too must follow.

We have already taken positive steps in some areas but we have a way to go and the **time for concerted action and real transformation is now.**

We need to integrate decarbonising and environmental principles into policy making. This will require us as Ministers having a duty to take account of environmental principles when making or revising policy, in the same way as proposed for all UK Ministers in the UK Government's response <sup>7</sup> to the Dasgupta Review.<sup>8</sup> This also supports the delivery of the UN Sustainable Development Agenda.<sup>9</sup>

The high level **Green Growth principles** underpinning this strategy, developed from engagement with stakeholders, are to:

- **Respect our planet** - by restoring and protecting our natural capital. Future human wellbeing depends on a healthy and resilient natural world
- **Decarbonise** - replace fossil fuels with renewable energy
- **Reduce our wasteful use of resources** - through greater efficiency and an increasingly diverse and circular economy
- **Re-evaluate, recognise and reward what matters** - create genuine, shared wellbeing by prioritising human development that we and the planet can live with
- **Lead by example** - inspire ambition, innovation and courage for change. Show the way by being honest, open and transparent in measuring our progress
- **Collaborate** - work and learn together to develop solutions that maximise the outcomes we want to see
- **Use all tools available** - balancing and utilising tools such as investing in research and development, de-risking new technology, regulation, legislation, incentives, information and budgets
- **Share responsibility** - we all must act and ensure that there is a just transition to a low carbon, nature rich society
- **Measure progress** - openness and transparency about progress, regularly evolving our actions through continuous learning and improvement based on data and science

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<sup>7</sup> Dasgupta\_Response\_\_web\_July.pdf (publishing.service.gov.uk). The Environmental Principles are integration; prevention; precautionary; rectification at source; and polluter pays.

<sup>8</sup> The Dasgupta Review is an independent, global review on the Economics of Biodiversity commissioned in 2019 by HM Treasury. <https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review>

<sup>9</sup> The 2030 Agenda for Sustainable Development was launched in 2015 to end poverty and set the world on a path of peace, prosperity and opportunity for all on a healthy planet. <https://www.un.org/sustainabledevelopment/development-agenda/>



We believe this new approach, balancing climate and environment action with our economic ambition, can be achieved by following these principles and ensuring they are at the core of all future policy development.

Whether operating in central or local government, private enterprise or voluntary and community sector, the decisions we make need to reflect the Green Growth principles. The principles apply equally well at an individual level too and each and every one of us can and should use them as a point of reference when making decisions around how we live, work, move around and interact with each other.

## Embracing change

The appetite for change and recognition that economies must transition is evident world-wide. Many other countries have produced strategies and plans to deliver on this agenda. The UK government has legislated for this change<sup>10</sup>, published its Ten Point Plan for a Green Industrial Revolution<sup>11</sup>, and has developed a UK Net Zero Strategy, Build Back Greener.<sup>12</sup> Wales, Scotland and the Republic of Ireland have also published their roadmaps to transition to net zero.<sup>13</sup> The climate action agenda is also being actively pushed forward locally by many of Northern Ireland's councils.<sup>14</sup>

We know citizens want action. We are committed to leading and co-ordinating the collective response to deal with the climate crisis. **The legislation that commits us to contribute to meeting the UK's target of net zero emissions by 2050 is already in place through the UK Climate Change Act 2008 and work is underway to develop a Northern Ireland specific Climate Change Act that will provide additional detail and confirm the specific targets we will need to achieve.**

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<sup>10</sup> <https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law>

<sup>11</sup> The Ten Point Plan for a Green Industrial Revolution (publishing.service.gov.uk)

<sup>12</sup> net-zero-strategy.pdf (publishing.service.gov.uk)

<sup>13</sup> Prosperity for All: A Climate Conscious Wales (gov.wales); ZWS1545 Our Path to Net Zero FINAL.pdf (zerowastescotland.org.uk); gov.ie - Climate Action Plan 2019 (www.gov.ie)

<sup>14</sup> A Net-Zero Carbon Roadmap For Belfast (belfastclimate.org.uk) <https://data.climateemergency.uk/media/data/plans/fermanagh-and-omagh-district-council-5490fc3.pdf>. <https://www.derrystrabane.com/Council/News/Council-introduces-Climate-Change-Emergency-Pledge>

This Green Growth Strategy, together with the budget, Programme for Government, the Investment Strategy and Anti-Poverty Strategy, will each set out cross-cutting, long-term ambitions and frameworks for delivery. Given the significance of the energy sector's contribution to decarbonisation, the Energy Strategy will also be key to delivering Green Growth. These Executive strategies reflect the need for a joined up approach, look to longer time horizons, are typically aligned with a net zero deadline of 2050, and are strongly focussed on decarbonisation and sustainability.

**Within departments, strategy, policy and programme development to support Green Growth are underway:**

from dealing with adaptation to meet climate change through flood management plans, and the Living with Water programme to mitigation strategies in the Environment Strategy. Other work that is ongoing includes: promoting a circular economy, sustainable and active travel, a programme to plant 18 million trees, a future agriculture policy, a pollinator scheme, and digital transformation initiatives.

## Developing the strategy

This Green Growth Strategy, a **multi-decade strategy to balance climate, environment and the economy**, has been developed by all Ministers and government departments working together. This has been done in collaboration with external stakeholders from local government, the private sector, voluntary and community sectors and others. Particular focus has been put on listening to younger citizens to understand their views on these issues - they will be the ones that will deliver many of these changes over the coming decades.

We have also been guided by science and evidence, reviewing available international, national and regional research. We have engaged with our colleagues in neighbouring administrations to understand their approaches to climate action and learn from their experiences. We also received supplementary advice from the Climate Change Committee (CCC), the independent, statutory body responsible for advising the UK and devolved governments on emissions targets and progress being made in reducing greenhouse gas (GHG) emissions.



Our strategy will be **delivered through a series of Climate Action Plans**, which are expected to align with carbon budget periods.<sup>15</sup> These will set out the **actions to meet sector-specific greenhouse gas emission targets** that will deliver: a cleaner environment rich in biodiversity; more efficient use of our resources within a circular economy; and green jobs.

Our **strategy is ambitious, but it must also be deliverable**, with progress measurable. This is just the start. We acknowledge there are gaps in our knowledge, science and data and **recognise it will be an iterative process**. We will build on the data modelling and emerging evidence and good practice, to revise and reshape our plans ensuring all three aspects of Green Growth are adequately reflected.

<sup>15</sup> Carbon budgets place a restriction on the total amount of greenhouse gases that can be emitted over a 5 year period and, in the UK, are legally binding. The government has now set the sixth carbon budget (2033-2037)



A hand-drawn style speech bubble with a black outline and a tail pointing downwards and to the right. Inside the bubble, the text "Have your say" is written in a large, bold, black font. Below it, the text "To leave your comments" is written in a smaller, regular black font, and "CLICK HERE" is written in a bold, black font.

**Have your say**  
To leave your comments  
**CLICK HERE**

# Balancing climate, environment and economy.

## Executive Commitments

1

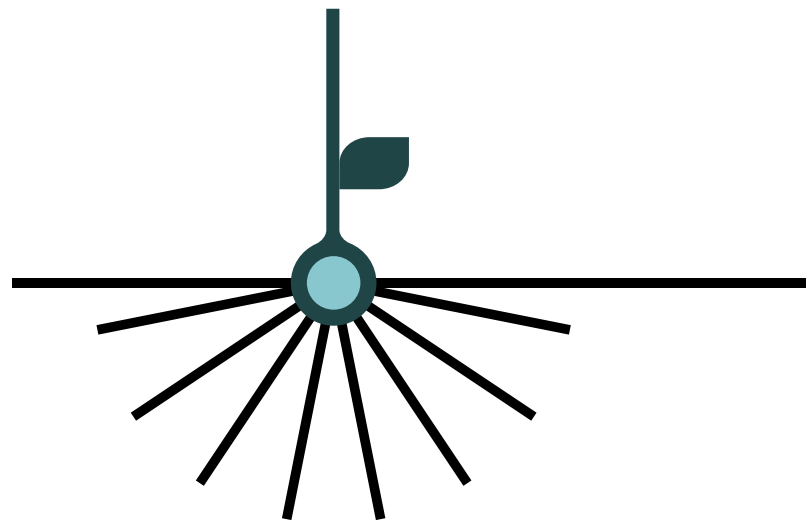
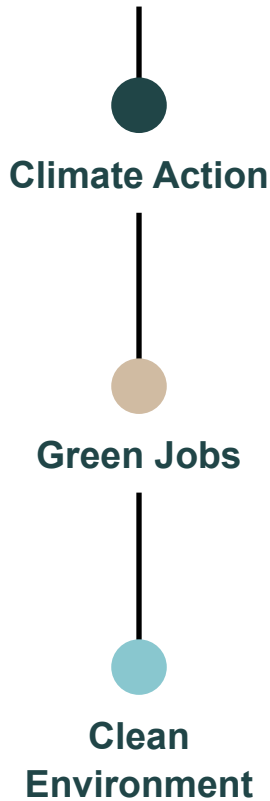
### *EMBEDDING GREEN GROWTH*

We will ensure that Green Growth is central to all our policy and budgetary decisions by introducing a statutory Green Growth test and making Green Growth a budgetary priority.



2

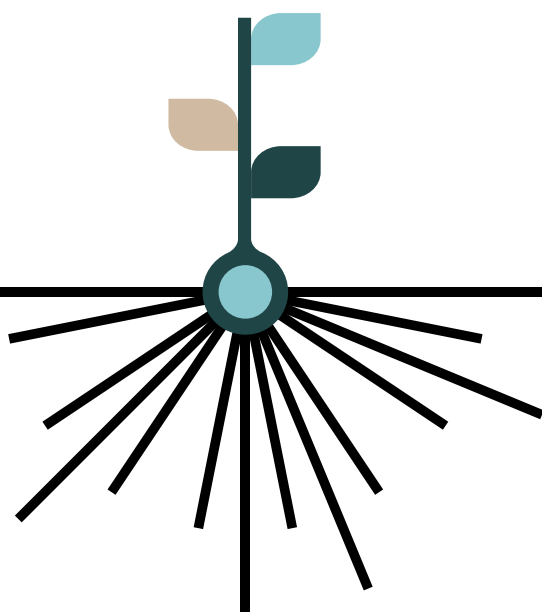
# Our approach to Green Growth - to improve the wellbeing of all our people



**It all starts with  
behavioural change:**

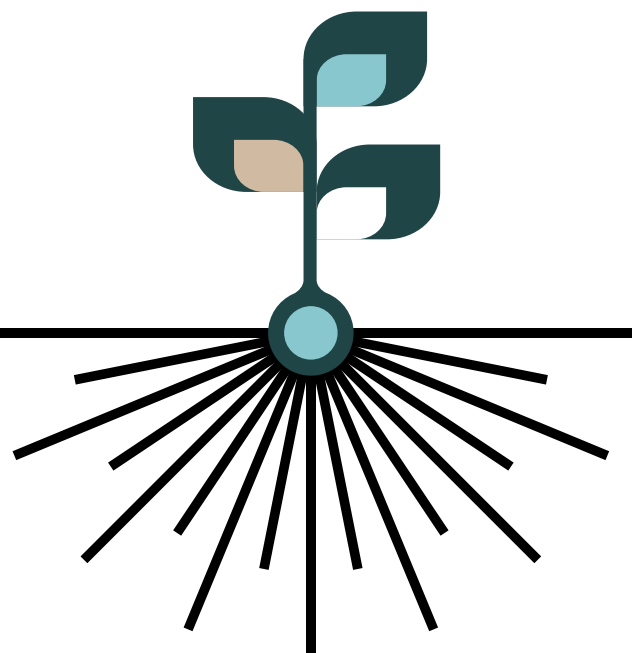
- Think differently
- Act differently
- Share the responsibility
- Fairness across society





**Positive behaviours  
become positive actions:**

- R&D
- Train New Talent
- Develop New Skills
- New Policies Across Every Sector



**The fruits  
of our labour:**

- Combat the Climate Crisis
- New Green Jobs
- Cleaner, Healthier Environment

## Why a Green Growth approach?

As we transition out of the Covid-19 crisis, people make the comparison between it and climate action. The question of how we respond to both, now and in the long term, is critical.<sup>16</sup> Joint solutions, resilience and learning and adapting will help us shape our response.<sup>17</sup> **Conversations about the economy, the environment and the climate crisis also must be brought together** to show the benefits to society of tackling it collectively.

Green Growth is not a new concept. The Organisation for Economic Co-operation and Development (OECD)<sup>18</sup> and others have been leading the way on this approach for some time. **Green Growth means using the move from a high to a low greenhouse gas emissions economy to improve people's quality of life through green jobs and a clean environment.** These goals are at the heart of sustainable development and by adopting a Green Growth approach we can have a healthier society (in terms of human, environmental and animal health). The Green Growth approach ensures that Northern Ireland can further deliver on the UN 2030 Agenda for Sustainable Development.<sup>19</sup>

## Taking action on climate

Central to our Green Growth approach will be tackling climate change; mitigating our impact and reducing our emissions of greenhouse gases, and ensuring we adapt and are resilient to the climate change that is now already inevitable. **This strategy recognises the need for adaptation and mitigation measures to work together to address both the causes and potential impacts of climate change.**

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<sup>16</sup> Building Forward: Consolidated Covid-19 Recovery Plan | The Executive Office ([executiveoffice-ni.gov.uk](http://executiveoffice-ni.gov.uk))

<sup>17</sup> 3 ways to talk about climate change and Covid-19 - RSA ([thersa.org](http://thersa.org))

<sup>18</sup> Towards Green Growth – A Summary for Policy Makers. Organisation for Economic Co-operation and Development (OECD), May 2011. <https://www.oecd.org/greengrowth/48012345.pdf>

<sup>19</sup> 21252030 Agenda for Sustainable Development web.pdf ([un.org](http://un.org))

Every 5 years the UK Government and Devolved Administrations develop a Climate Change Risk Assessment (CCRA),<sup>20</sup> informed by independent advice, provided most recently by the CCC, of the risks from climate change. In response to the most recent CCRA, a National Climate Change Adaptation Programme<sup>21</sup> and Northern Ireland Adaptation Programme (NICCAP) have been developed.<sup>22</sup> The NICCAP sets out the evidence and each Department's response to the risks and opportunities relevant to Northern Ireland as identified in the CCRA.

## Delivering a resilient environment

The Green Growth approach is about more than just climate targets. It also considers how we deliver sustainable development and safeguard our precious natural environment for our health, well-being and long term prosperity. We will work to develop appropriate indicators and measures of success in collaboration with the Programme for Government and key policies and strategies such as the Environment Strategy, 10x Economy, Investment Strategy, Energy Strategy, Skills Strategy and Future Agriculture and Food policy frameworks.

Our natural environment is one of our most important assets and contributes to our prosperity and well-being in numerous ways. It provides the essential services for our life and work, from the air we breathe, the food we eat and the water we drink, to the resources for our infrastructure and built environment. It protects our communities from flooding and extreme weather, helping us adapt to the changing climate; and supports our health and quality of life, providing open spaces for exercise, social engagement and mental well-being.<sup>23 24</sup>

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<sup>20</sup> Independent Assessment of UK Climate Risk - Climate Change Committee ([theccc.org.uk](http://theccc.org.uk))

<sup>21</sup> Climate change: second national adaptation programme (2018 to 2023) - GOV.UK ([www.gov.uk](http://www.gov.uk))

<sup>22</sup> Northern Ireland Climate Change Adaptation Programme | Department of Agriculture, Environment and Rural Affairs ([daera-ni.gov.uk](http://daera-ni.gov.uk))

<sup>23</sup> Article 17 Habitats Directive Report 2019 (Habitats) Article 17 Habitats Directive Report 2019 (Species)

<sup>24</sup> State of Nature 2019 Reports UK Trends Report 2021

Whilst we recognise the significant work that has been done, we know from Northern Ireland Environmental Statistics reports<sup>25</sup> that aspects of our natural environment are under pressure. Continuing to meet consumption by traditional methods is damaging our environment and there is much we can do to improve it.

We must address these challenges to restore and protect the natural assets we rely on, while supporting their sustainable use.<sup>26</sup>

The Environment Strategy sets out detailed information on policies to address these environmental challenges and along with strategies for Clean Air, Biodiversity and Peatlands and a Circular Economy Strategic Framework, targets and action support the overarching Green Growth objectives. This Green Growth Strategy supports the principles set out in the Environment Strategy and together these will help us to fulfil the commitments in the UN Leaders' Pledge for Nature<sup>27</sup> making us 'nature positive' by 2030 and living in harmony with nature by 2050.

## Developing a green economy

The transition to a new economic and societal model will have major consequences for jobs. Some will cease to exist, others will evolve and there will be new opportunities. The UK Government's 10 Point Plan for a Green Industrial Revolution<sup>28</sup> sets out to create and support up to 250,000 jobs across the UK by 2030 as part of efforts to move to net-zero.

We want Northern Ireland to see a significant share of this growth in jobs, taking advantage of opportunities that will arise from our transition to a greener, more sustainable economy. Growing a "Greener and sustainable" economy is a guiding principle set by the Department for the Economy in its 10x Economy vision.<sup>29</sup> This recognises the need to undertake a transformational approach to our ways of living in order to reduce our carbon footprint and cut waste across a number of priority clusters in Northern Ireland.

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<sup>25</sup> Northern Ireland Environmental Statistics Report 2021 | Department of Agriculture, Environment and Rural Affairs ([daera-ni.gov.uk](http://daera-ni.gov.uk))

<sup>26</sup> Environment Strategy for Northern Ireland - NI Direct - Citizen Space

<sup>27</sup> Political leaders participating in the United Nations Summit on Biodiversity in September 2020, representing 88 countries from all regions, and the European Union, have committed to reversing biodiversity loss by 2030.

<sup>28</sup> The ten point plan for a green industrial revolution - GOV.UK ([www.gov.uk](http://www.gov.uk))

<sup>29</sup> A 10x Economy ([economy-ni.gov.uk](http://economy-ni.gov.uk))



These clusters are envisaged as being the future engine of growth for our economy. It is recognised there are significant economic opportunities and adjustments that will be needed. Industries such as energy, transport and construction will see changes in technology, which will present windows of opportunity to grow sustainably.

We know that low carbon and renewable energy are already important parts of our economy and it is estimated that this sector generates around £1 billion in turnover annually and provides 5,900 full time equivalent (FTE) jobs.<sup>30</sup> This includes jobs in areas such as low emission vehicles and infrastructure, the production of energy efficient products and lighting, energy monitoring systems, and renewables.

The development of “circular jobs” will also be an important tenet of our future economic model. To support this, work is ongoing developing a Circular Economy Strategic Framework (CESF). These jobs will be the result of prioritising regenerative resources, extending the life-time of products, using waste as a resource, creating value for secondary materials and sharing knowledge on circularity. It will include jobs in repair, waste and resource management, procurement, renewable energy, agronomy, biosciences, leasing, education, design, engineering, digital technology and more. The CESF will provide a sound basis for directing future investment towards innovation, research and development, entrepreneurial Circular Economy initiatives and support to incentivise existing businesses to adopt circular business models.

Defining what we mean by green jobs is important. Work is underway to establish a common understanding and measurement of green jobs, which will enable us to measure change over time. The Office of National Statistics, through the Low Carbon and Renewable Energy Economy Survey,<sup>31</sup> is collecting information from businesses to estimate the size of the green economy, including low carbon and renewable energy activities. The low carbon economy is defined as economic activities that deliver goods and services that generate significantly lower emissions of greenhouse gases; predominantly carbon dioxide.

The intention is that UK government departments and devolved administrations will use this information to assess and develop policies relating to green job creation, potential growth and investment opportunities both nationally and regionally.

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<sup>30</sup> DfE Energy in Northern Ireland, <https://www.economy-ni.gov.uk/articles/energy-northern-ireland>

<sup>31</sup> Low carbon and renewable energy economy, UK - Office for National Statistics ([ons.gov.uk](https://ons.gov.uk))

## Embedding Green Growth

We recognise the need through this Green Growth Strategy, and subsequent Climate Action Plan, to coordinate planning and delivery across climate, environment and green jobs. The CCC progress report recommends government should “ensure all policy decisions, and procurement decisions, are consistent with the Net Zero goal and reflect the latest understanding of climate risks.” It also recommends that guidance documents used in policy and business case development should be “...consistent with the requirements of Net Zero and account for the impacts of climate change” and that government should “consider options for introducing a Net Zero Test to ensure that all policy decisions are compatible with the legislated targets.”

Acknowledging that legal obligations already exist under a range of environmental and sustainable development legislation,<sup>32 33</sup> we will introduce a statutory **Green Growth test** so climate action, the environment, including its natural capital assets and green jobs are considered in the appraisal of all policies, programmes and projects for which there are public funding implications.<sup>34</sup> We will apply this test to all activities seeking to utilise public funding thus ensuring that the climate responsibilities are taken account of by local governments, the private sector and voluntary and third sectors when using public money.

This will ensure proposals that have ‘adverse impacts’ on emissions reductions or contrary to the Green Growth principles are identified and the relevant authority will have a duty to consider how these might be reduced. A statutory Green Growth test will make sure this happens in practice, putting our Green Growth principles in our decision making at all levels.

The processes for carrying out this assessment, as well as indicators and metrics, will be developed as a priority. Over the coming months, we will work with stakeholders across government to understand the best and most practical way of implementing the Green Growth test into existing processes.

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<sup>32</sup> Wildlife and Natural Environment Act (Northern Ireland) 2011 ([legislation.gov.uk](http://legislation.gov.uk))

<sup>33</sup> Northern Ireland (Miscellaneous Provisions) Act 2006 ([legislation.gov.uk](http://legislation.gov.uk))

<sup>34</sup> In the same way they exist for areas such as equality and rural proofing <https://www.equalityni.org/Employers-Service-Providers/Public-Authorities/Section75/Section-75/What-is-an-EQIA>

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**Have your say**  
To leave your comments  
**CLICK HERE**

# Pathway to a low emissions society.

## Executive Commitments

2

### *LEGISLATING FOR CHANGE*

We will introduce legislation for reducing greenhouse gas emissions consistent with the UK's ambition to achieve net zero by 2050 and, to deliver upon this, we will develop clear targets and pathways in a Climate Action Plan from 2022.



3



## Climate Change Bills

At the heart of our Green Growth approach is climate action. We already know that if we are to achieve UK net zero by 2050 we will need a clear pathway to enable us to measure progress.

Two Climate Change Bills are progressing concurrently through the Assembly's legislative passage process. These have different headline greenhouse gas emission reduction targets. The Climate Change Bill brought forward by DAERA sets an at least 82% net reduction in Northern Ireland's greenhouse gas emissions by 2050, in line with the CCC's assessment of what is Northern Ireland's fair, equitable and achievable contribution towards the UK net zero by 2050 target. A Private Member's Bill sets a target for Northern Ireland of net zero greenhouse gas emissions by 2045.

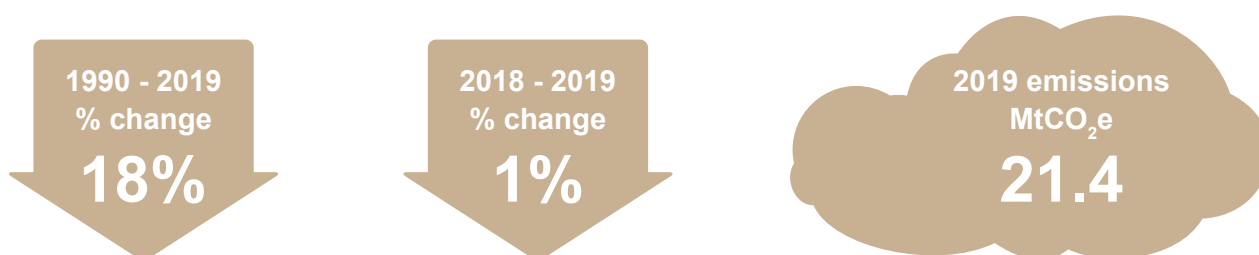
This strategy is based on the advice from the CCC, as this represents the most robust and credible evidence available to us at this stage. The emissions targets in this Strategy will be revised if targets in the NI Climate Change Act differ from those in the CCC Sixth Carbon Budget Balanced Pathway scenario. However, irrespective of which Bill proceeds, significant and widespread change is needed across all areas to enable us to achieve these targets.

## Where are we now?

Understanding where we are now and our progress in recent decades helps us plot the path forward. In 2019, Northern Ireland's total greenhouse gas emissions (as estimated as part of the UK GHG Inventory)<sup>35</sup> were estimated to be 21.4 million tonnes of carbon dioxide equivalent.<sup>36 37</sup> Northern Ireland accounted for 5% of UK greenhouse gas emissions in 2019, compared to approximately 3% of the UK population. Agriculture (26%), transport (20%) and residential buildings (14%) were the largest sectors in terms of emissions in Northern Ireland (2019).

In total, the UK reduced emissions by 44% between 1990 (the base year) and 2019. However, the reduction in emissions over this time period in Northern Ireland was 18%, somewhat less than the reductions in Scotland (45%), England (44%) and Wales (31%).

## Total greenhouse gas emissions

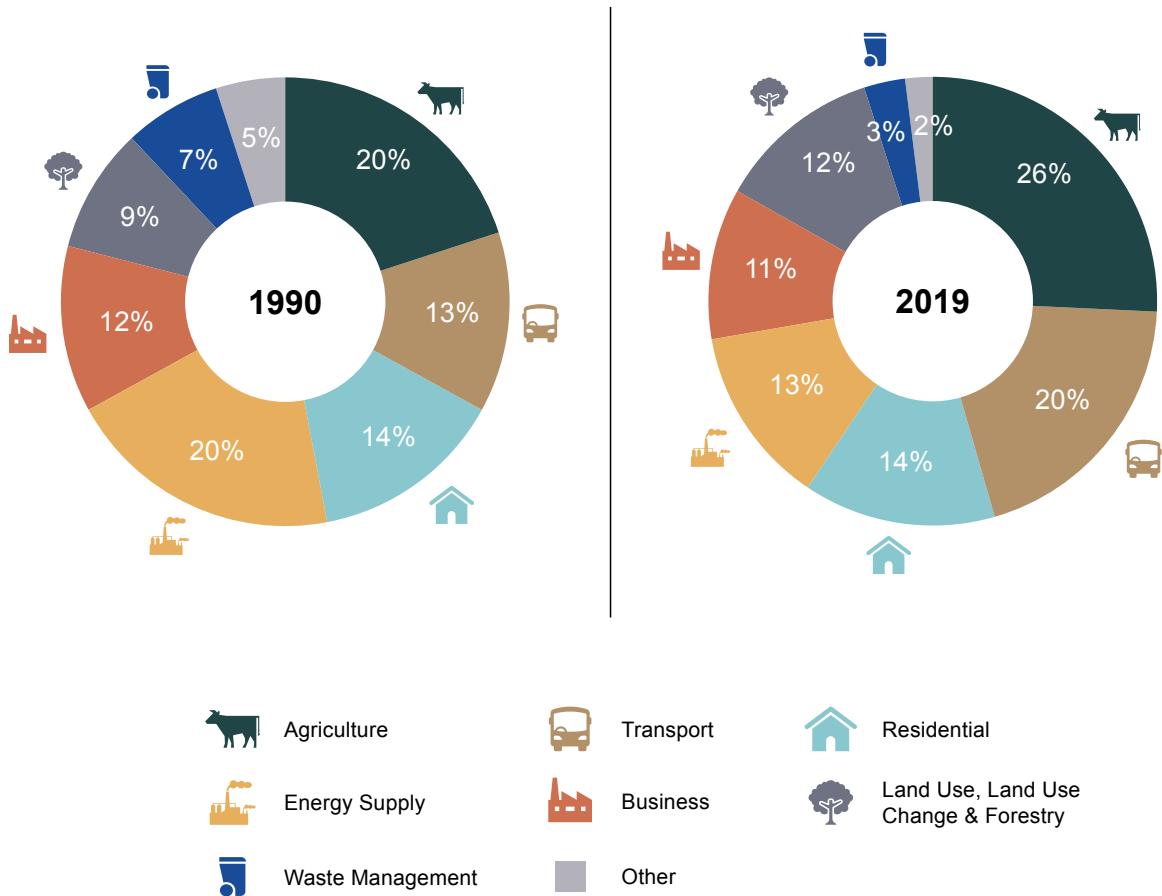


<sup>35</sup> The Northern Ireland Greenhouse Gas (GHG) Inventory contains data detailing GHG emissions in Northern Ireland from 1990 to the latest reporting year. It is a subset of the UK GHG Inventory, which is produced to fulfil both European Union Monitoring Mechanism (EUMM) and United Nations Framework Convention on Climate Change (UNFCCC) reporting requirements the UK has under the Kyoto Protocol. It is compiled in line with international guidance from the International Panel on Climate Change (IPCC). The sectors used by the CCC differ in some places from the National Communication (NC) sectors used in the GHG inventory. For example, emissions from waste incineration with energy recovery are reported in the Energy Supply NC Sector but CCC report them in the Waste sector.

<sup>36</sup> Carbon dioxide equivalent, (abbreviated to CO<sub>2</sub>e) is a metric measure used to compare emissions from various greenhouse gas emissions on the basis of their global-warming potential.

<sup>37</sup> Northern Ireland greenhouse gas inventory 1990 – 2019 statistical bulletin | Department of Agriculture, Environment and Rural Affairs (daera-ni.gov.uk)

## Emission levels by sector



Most sectors in Northern Ireland have shown a decrease in emissions since 1990. The largest decreases, in terms of tonnes of carbon dioxide equivalent, have been in the energy, waste management and residential sectors. This has been driven by the energy sector switching from coal to natural gas and increased use of renewables (primarily from onshore wind), a move replicated within the residential sector and the introduction of methane capture and oxidation systems in landfill management.<sup>38</sup> However, other sectors including transport and agriculture have not seen falls in emissions, and now account for a higher proportion of our emissions than thirty years ago.

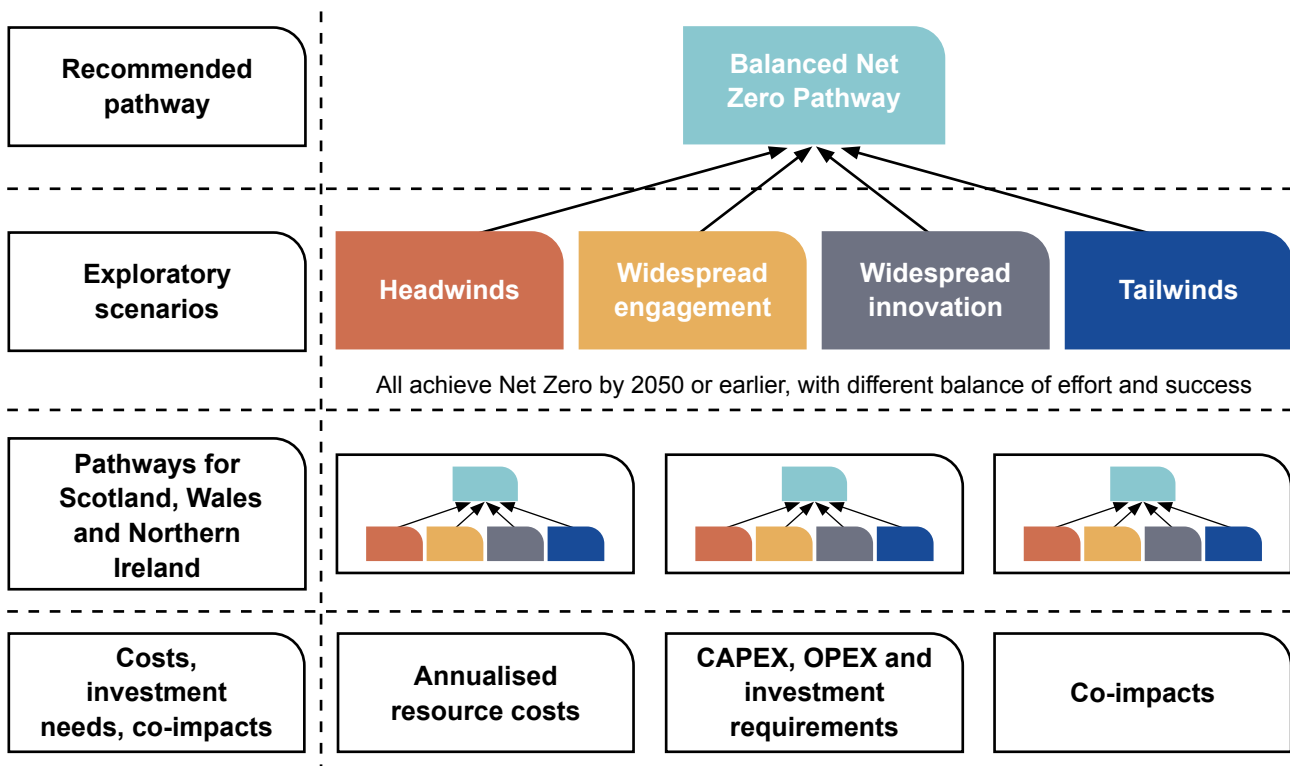
<sup>38</sup> Northern Ireland Greenhouse Gas Statistics 1990 - 2019 (daera-ni.gov.uk)

## The pathway to UK Net Zero

The CCC has explored a range of scenarios and set out a recommended pathway for the UK as a whole to achieve net zero emissions by 2050 termed the 'Balanced Pathway'. This 'Balanced Pathway' requires a 78% reduction in territorial emissions for the UK overall between 1990 and 2035. In effect, this brings forward the UK's previous 80% target by nearly 15 years reflecting the growing urgency. There is no clearer indication of the increased ambition implied by the Net Zero target for all of the UK than this.

The CCC states that the “*pathway meets the Paris Agreement stipulation of 'highest possible ambition'. It is challenging but also hugely advantageous, creating new industrial opportunities and ensuring wider gains for the nation's health and for nature.*”<sup>39</sup>

## Our analytical framework includes five costed pathways for Northern Ireland and for the UK



Source: CCC

<sup>39</sup> The Paris Agreement also recognises the need for food production... 'increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production'; I09r01.pdf (unfccc.int)



## The pathway for Northern Ireland

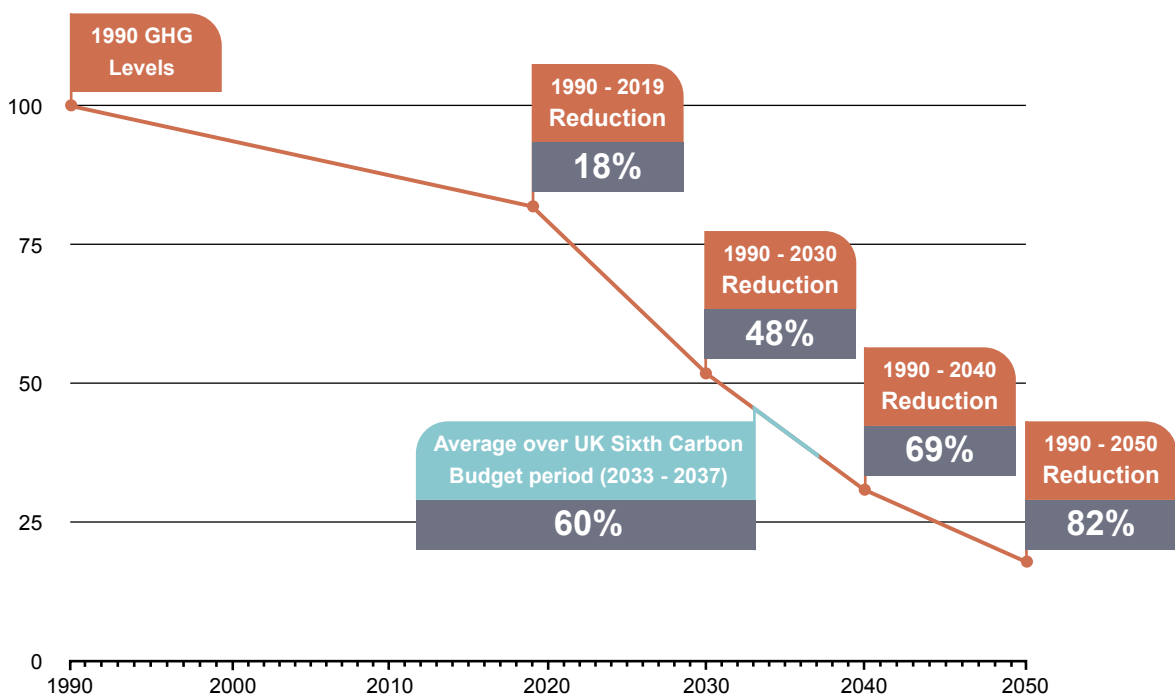
The CCC advised that for the UK to meet its overall target, Northern Ireland will be expected to contribute its share and **reach at least an 82% reduction in greenhouse gases by 2050** compared to 1990 levels (excluding engineered greenhouse gas removals). It also envisages that Northern Ireland will achieve Net Zero carbon dioxide (CO<sub>2</sub>) emissions by 2050.

**To achieve this overall GHG emissions target of 82% by 2050 we will need to be on a trajectory that achieves at least a 48% reduction in all emissions by 2030 and 69% by 2040.**

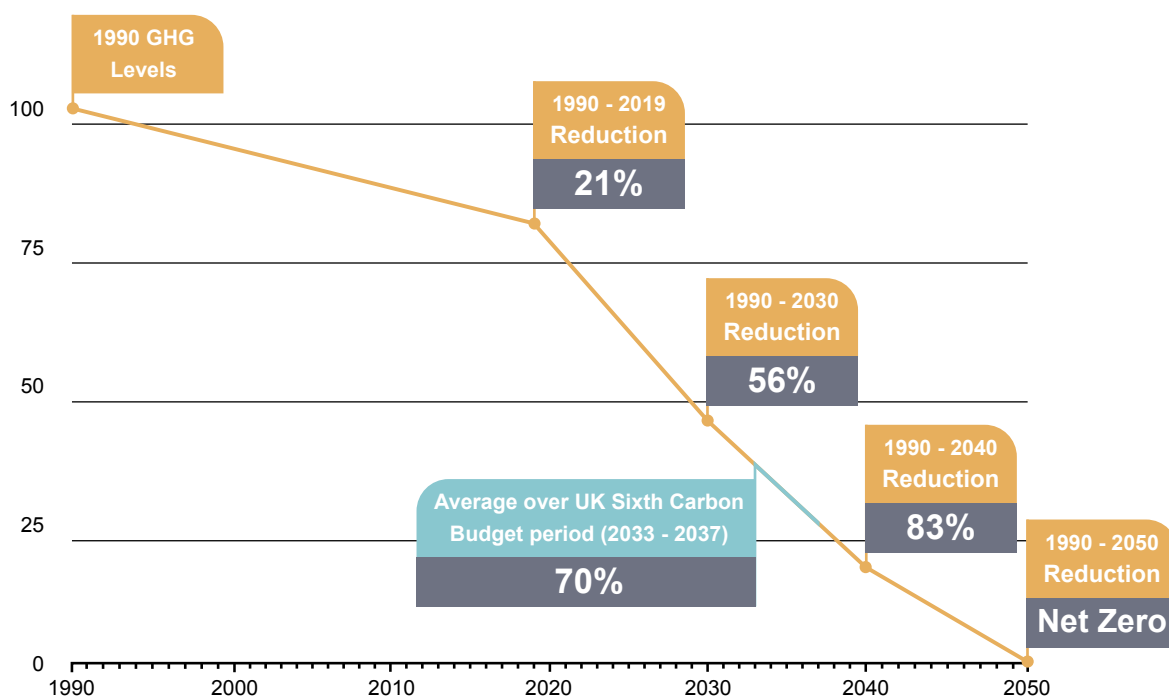
But we know that achieving these reductions will be a significant challenge and the reductions of 18% we have achieved in the last 31 years (compared to the 1990 baseline) highlight the scale of the challenge ahead in the coming 29 years. **In the next decade the fact we have to do almost twice as much as has been achieved to date in less than a third of the time** means that we need a fundamental change in our approach. We must take action urgently.

## Emissions reductions for Northern Ireland in the UK Balanced Net Zero Pathway

### REDUCTION IN ALL GHG EMISSIONS COMPARED TO 1990 LEVELS



## REDUCTION IN ALL CO<sub>2</sub> EMISSIONS COMPARED TO 1990 LEVELS



There will be distinct phases in our emissions reduction journey. We know considerable progress must be made in all areas in the first half of the 2020s. We are now designing new policies to facilitate the widespread change needed to reduce emissions and deliver essential environmental, economic and health benefits. The 2020s will be focused on scaling up of low-carbon technologies and behaviours and building essential supply chains. As well as behavioural changes, this means deploying large volumes of renewable generation, energy improvements in buildings and electric vehicle roll-out. This is critical to facilitate a mass rollout from the 2030s onwards.

**“The 2020s must be the decisive decade of progress and action for tackling climate change”**

[The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf](#)

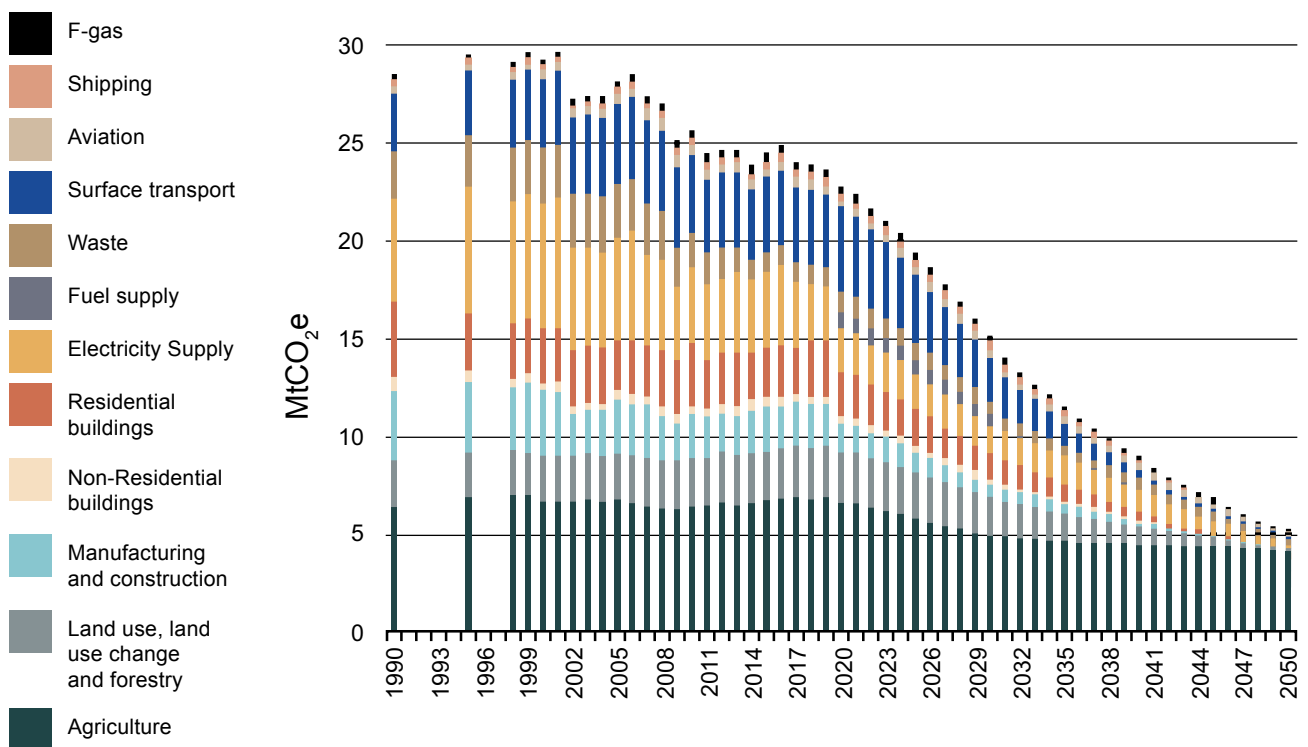
By the 2030s choices in all areas must be the low-carbon option. It is envisaged that it will take around 15 years for the low carbon replacement to flow through the capital stock, with the fastest rate of replacement occurring in the 2030s.<sup>40</sup>

<sup>40</sup> Policies-for-the-Sixth-Carbon-Budget-and-Net-Zero.pdf (theccc.org.uk)

## The scale of change required

The ‘Balanced Pathway’ trajectory proposed by the CCC has been set to ensure that Northern Ireland is on a progressive path to reduce emissions to 2050 targeted levels. Having set this overall trajectory for Northern Ireland it is important to break this down into sectors. Change will be **required across all areas, but there are some areas that present significant challenges for Northern Ireland**. Understanding how sectors will each have to change will be important to ensure each ‘owns’ their progress and is responsible for the financial and carbon budgetary consequences associated with it.

## Sectoral emissions in Northern Ireland under the UK’s Balanced Net Zero Pathway compared to historical emissions



Source: NAEI (2021) Greenhouse gas inventories for England, Scotland, Wales & Northern Ireland: CCC (2020) The Sixth Carbon Budget: CCC analysis.

Notes: Emissions from 1990-2019 are the published GHG inventory. Emissions from 2020 onwards are modernised scenario - the CCC Balanced Pathway for Northern Ireland’s contribution to UK Net Zero Methane (CH<sub>4</sub>) emissions are included in this chart with a global warming potential (GWP) of 34 in line with the set of IPCC AR5 report that include carbon-cycle feedbacks. This compares to the latest published inventory where methane has a GWP of 25.

Our pathway to 2030, 2040 and indeed 2050 emission reduction targets will require honest and often difficult conversations and decisions.<sup>41</sup> We know much about the challenges and opportunities in reshaping transport, energy, agriculture, housing and waste to reduce greenhouse gas emissions but more must be done to understand the trade-offs, impacts and costs across all sectors. Decisions will not always be easy.

We do not set sectoral targets in this strategy. This will be informed by a Northern Ireland specific Climate Change Act, which will provide additional detail around specific targets we will need to achieve. It will be the duty of each department with primary responsibility for the relevant sector to deliver on existing policies and, where none exists, to bring forward policies to deliver upon the milestone targets, aligned to each carbon budget. Coordination across government will be crucial given the interconnected nature of certain sectors and we will play an important role in delivering this. Establishing and prioritising the right interventions to deliver actual and measurable change is absolutely key. As well as evidence, doing this requires ‘winning of hearts and minds’, courage and innovation.

## DEFINING SECTORS

How we define the specific sectors for sectoral pathways and trajectories is important to enable us to measure progress. There are many options for doing this, such as aligning with government departmental structures, aligning with existing reporting (like the IPCC<sup>42</sup> or NI greenhouse gas inventory reporting<sup>43</sup>) or with easily understood industry groupings.

We will also need to define what is included within these sectors. Northern Ireland is highly reliant on its air and shipping links. The CCC has made specific recommendations that our scope should cover international aviation and shipping, focussing on domestic efforts to reduce emissions rather than credit purchasing.<sup>44</sup> **For us this means we must be conscious of Northern Ireland’s carbon leakage** and aware of our overseas consumption footprint.

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<sup>41</sup> The Committee has deliberately opted to “front-load” decarbonisation in their recommendations of emissions reduction targets for Northern Ireland and the rest of the UK – more will need to happen in the 2020s and the earlier half of the Sixth Carbon Budget period than in the latter half and the 2040s. This approach, the CCC said, would reduce the cost of the transition, as technologies would mature sooner and investors would have the policy certainty needed to provide support at scale. Front-loading of action also leads to lower cumulative emissions of greenhouse gases and therefore less warming.

<sup>42</sup> <https://www.ipcc.ch/report/2019-refinement-to-the-2006-ipcc-guidelines-for-national-greenhouse-gas-inventories/>

<sup>43</sup> [https://www.daera-ni.gov.uk/sites/default/files/publications/daera/NI%20Greenhouse%20Gas%20Statistics%201990-2019\\_2.pdf](https://www.daera-ni.gov.uk/sites/default/files/publications/daera/NI%20Greenhouse%20Gas%20Statistics%201990-2019_2.pdf)

<sup>44</sup> <https://www.theccc.org.uk/publication/letter-economic-costs-of-setting-and-delivering-a-2050-emissions-target-for-northern-ireland/>

In considering the most appropriate sectors to report against we are guided by the need for transparency as well as by the science and evidence we are using to inform target and trajectory setting. This is being provided mainly by the CCC. We believe our Green Growth Strategy would therefore benefit from aligning to the CCC sectors, as this will enable comparisons to the CCC pathways and progress to be tracked more easily. A similar approach has been taken with the Scottish Government's Climate Change Plan.

The CCC has not recommended that sectoral targets be set in law, and they do not feature in UK, Scottish or Welsh climate legislation. We are, therefore, not proposing to legislate for these sectoral targets but to use them as a way to ensure that action is taken and progress is measured.

While the CCC 'Balanced Pathway' is illustrative of what an achievable path to UK Net Zero could look like, we also recognise a little more or a little less may be achieved in any given area, or alternative low-carbon solutions could be used. As we improve our own analytical capabilities and our data, then other scenarios and our understanding will evolve. The most important thing is that the overall level of ambition and delivery must match. The Balanced Pathway is, by design, stretching in all areas. This means that there is limited scope to diverge significantly in any one area, as this will involve trade-offs or substantial changes to ambition and progress in other sectors.

## **Developing a Climate Action Plan**

This Green Growth Strategy outlines our vision for 2050 and sets out a framework for tackling the climate crisis in the right way. To deliver on this vision we need specific concrete actions. We will publish Northern Ireland's first Climate Action Plan (CAP) in 2022. The CAP will set out the overall targets as stated in the legislation, define the relevant sectors and set out how we intend to measure progress for each.

It will build on the CCC's advice to define trajectories and measurable pathways for each sector. It will also seek to adopt a holistic approach, balancing climate action, the environment and the economy.



Work is already underway across departments to gather evidence, carry out analysis, engage with stakeholders and consider how best the actions we take will lead to Green Growth and climate action outcomes. The Climate Action Plan will set out the emissions reductions targets and the sectoral implications, outline the actions to deliver on the commitments in this Green Growth Strategy, breakdown the actions by sectors, and define the timeframes and those responsible for delivering the actions. It will also set out the expected impacts and methods of measuring success.

A Climate Action Plan will be developed and published every five years, in line with a Northern Ireland Climate Act when adopted. The plans will have regard to carbon budgets set under a Northern Ireland Climate Change Act and sectoral targets and trajectories, with proposals and plans to meet the carbon budget for the period set out.

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**Have your say**

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# Transition in the right way.

## Executive Commitments

3

### *A FAIR TRANSITION*

We will ensure that the transition we make will be a “Just Transition”, fair for all our citizens, and we will establish a Just Transition Commission in 2022.

4

### *PEOPLE FIRST*

We commit to putting citizens at the heart of our Green Growth policy development and delivery by ensuring ongoing engagement with young people and other key groups, including a Citizen Assembly Panel.

5

### *SUPPORTING BEHAVIOURAL CHANGE*

We will promote behavioural change by providing low carbon options, infrastructure, timely information, advice and support to citizens and businesses to enable them to make informed choices on the transition to a low emissions economy.

6

### *EVIDENCE BASED DECISION MAKING*

We will ensure our decisions and actions associated with the transition to low emissions, green jobs and a clean environment are underpinned by robust and timely evidence and science.





4

## Ensuring a Just Transition

The transition we make must be managed fairly and be just. This means moving to a more sustainable economy, in a way that is understood to be equitable and well managed. The lives and wellbeing of people must be protected and enhanced, and appropriate plans put in place.

International Guidelines describe a **Just Transition** as a process towards an environmentally sustainable economy and society, which *“needs to be well managed and contribute to the goals of decent work for all, social inclusion and the eradication of poverty.”*<sup>45</sup> The CCC equally emphasises the need for a just transition in its Sixth Carbon Budget Report.<sup>46</sup> **An inclusive and Just Transition is at the heart of our Green Growth Strategy.**

“Fairness is also fundamental to public support and must be embedded throughout policy. Only a transition that is perceived as fair, and where people, places and communities are well-supported, will succeed. UK Government policy, including on skills and jobs, must join up with local, regional and devolved policy on the just transition. Vulnerable people must be protected from the costs of the transition.”

The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf

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<sup>45</sup> ILO: Guidelines for a just transition towards environmentally sustainable economies and societies for all, 2015

<sup>46</sup> The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf



Other jurisdictions have plans in place to ensure a just transition.

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In the **Rep. Of Ireland, the Wider Midlands** is the first region to undergo a concentrated transition away from carbon intensive activities. Peat related jobs will make way for jobs in renewable energy, bog rehabilitation and other new business opportunities. The Department of the Environment, Climate and Communications has appointed a Just Transition Commissioner to engage with stakeholders in this region and work up recommendations for a just transition. In 2020 a Just Transition Fund was set up to ensure that peat workers and the Midlands as a community are fully supported.

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**Scotland** was the first to establish a Just Transition Commission to advise Ministers on how to apply Just Transition principles. This will involve plans and investment to transition to environmentally and socially sustainable jobs, sectors and economies and will build on Scotland's economic and workforce strengths and potential.

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**Wales** is undertaking research on the best approach to Just Transition. The Wales Centre for Public Policy (WCPP), an independent organisation, that works closely with government policy makers and practitioners, has been commissioned to explore how these implications can be understood, and mitigated through a 'Just Transitions' framework.

Building on the recent research by the Neven Economic Research Institute<sup>47</sup> and others including QUB's work on the Just Energy Transition,<sup>48</sup> we will ensure that best practice and current thinking is to the fore in ensuring a just transition in Northern Ireland.

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<sup>47</sup> "Supporting People and Place: Planning for a Just Transition in Northern Ireland" (NERI Working Paper Series No. 71 December 2020)

<sup>48</sup> News | Mapping a Just Energy Transition in Northern Ireland | Centre for Sustainability, Equality and Climate Action (SECA) | Queen's University Belfast (qub.ac.uk)



## Engagement and Changing Behaviour

As individuals, we each have an important role to play. It will be **our behaviours and individual choices that will dictate whether we can address the climate crisis in time**. Individual decisions about how we travel, what we consume, where we work, what we eat and how we value nature and the world around us will collectively add up to success or failure. It is also no longer sensible to consider the environment in isolation from our economy.

Better information is an important step. Recognising this new “one stop shop” for information, technical advice and relevant support for all energy consumers will be established as outlined in the new Energy Strategy.

Further support beyond better information will also be needed. This means ensuring low carbon options are available to people to enable them to change behaviours. The necessary infrastructure must be in place, for example, the cycle lanes to facilitate a switch to cycling or charging points to facilitate a switch to electric vehicles.

We recognise that some changes will be easier than others. Success will inevitably be dependent upon some cases of “nudging” to change behaviours and increasing awareness, and in others regulation, legislation and enforcement will be required, or financial support to mitigate additional costs.

Better public information is needed on the changes that people should expect, and on the timing of their implementation. Meaningful public engagement will help build stronger public consent for the transition, and people should expect to understand the rationale for changes. They should also be able to see a benefit from making low-carbon choices and have easy access to the information and funding required to make changes happen.

[Progress-in-reducing-emissions-2021-Report-to-Parliament.pdf](https://www.theccc.org.uk/wp-content/uploads/2021/06/Progress-in-reducing-emissions-2021-Report-to-Parliament.pdf) (theccc.org.uk)

The CCC has stated that reaching Net Zero will require more involvement from people in engaging with the emissions reductions required, and reducing or adapting demand for energy-intensive services.

In their Sixth carbon budget report,<sup>49</sup> they estimate that more than 40% of the abatement to 2035 will involve at least some degree of change from consumers (such as driving an electric car, or installing a heat pump instead of a fossil fuel gas boiler). They emphasise that “shifting quickly towards healthier diets, reducing growth in aviation demand and choosing products that last longer and therefore improve resource efficiency are all key.”

It is therefore critical that stakeholders’ views help shape and drive the proposed changes and the pace of change.

## **ENGAGEMENT WITH YOUNG PEOPLE IN DEVELOPING THIS STRATEGY**

Listening to and acting on the views of young people is a must for the success of this Green Growth Strategy. The Education Authority worked with a team of young people from various organisations to co-design a youth survey and facilitate focus groups to get their input on the Green Growth Strategy.

The focus groups represent young people from 16 to 22 years, from both rural and urban backgrounds with a wide range of interests including Mid Ulster Youth Voice, Belfast Climate Commission Youth Working Group, CAFRE, Lisburn Castlereagh Youth Council (Youth Voice group), Newry and Mourne Youth council (Youth Voice group), Ulster Wildlife, Grassroots Challenge, Causeway Coast and Glens Youth Voice, Fermanagh and Omagh Youth Voice and North West Ministry of youth (Derry and Strabane youth voice group). The conclusions and recommendations from the youth research, was presented by the young people to DAERA and helped us shape our Green Growth Strategy.

<sup>49</sup> Sixth-Carbon-Budget-UKs-path-to-Net-Zero.pdf (gshp.org.uk)

We will ensure citizens, including young people, are involved throughout the process as they will be responsible for delivering these changes.

## Evidence based decision making

To ensure our transition is just we need to understand the implications of choices and options, and policy decisions.

**Our decisions on Green Growth will be guided by robust science, data analysis and timely evidence.**

Through the Covid crisis we have seen the importance of reliable data to inform decisions. We also know the importance of considering the potential unintended consequences of decisions on other areas. Climate, environment and green jobs are areas where the science and data are evolving and improving. We will work with others to **improve the data quality and coverage**. We will collect relevant data across all sectors to understand the impacts, positive and negative, on enhancing the environment and emissions reductions. In addition, we will collaborate with others by sharing our data, to accelerate progress and learn from others. Understanding and measuring the impact of our actions helps us make sure we are on track to meet targets.

The CCC has been our primary source of evidence to inform the climate aspect of this strategy. We will continue to work across government, with the CCC and others, including our in house data modelling and scientific capability, to build the evidence base on the environment and economic aspects of transitioning.

**Have your say**

To leave your comments  
**CLICK HERE**

# From policy to delivery.

## Executive Commitments

7

### *INVESTING IN GREEN GROWTH*

We will transform our economy by working proactively with businesses, communities and all parts of government to maximise funding and investment opportunities for Green Growth and promote innovation, skills, research and technology.

8

### *LEADING BY EXAMPLE*

We will provide public sector leadership by delivering a government estate and fleet with net zero operational carbon emissions and ensure a Green Growth aligned procurement strategy for all government spend.

9

### *WORKING WITH OTHERS*

We will commit to ensure all government departments and the wider public sector work together to maximise our decarbonisation efforts, and will work in partnership with our neighbours across UK regions and the Republic of Ireland.





5

## Enabling delivery

Delivering the Green Growth vision necessitates a sharp focus on the key ‘enablers’ - innovation, technology, skills, partnership, collaboration and leadership. Investment in these levers will help us to navigate the change across sectors in a way that maximises the opportunities but also mitigates unintended consequences. By focusing on these areas, we can lay the foundations for a green revolution, the next industrial revolution, which can revive our economy post Covid-19.

We are already progressing work on these issues. Through our various strategies, such as 10x Economy, the Skills Strategy<sup>50</sup> consultation, the Future Agriculture Policy Framework<sup>51</sup> and the Energy Strategy, we are developing the policies and programmes we need.

## Investing in innovation, technology and skills

Innovation is the bedrock of our future plans. As well as utilising existing technologies better, we will harness new technology and embrace innovation. ‘10x Economy’<sup>52</sup> sets out the vision for the 2020s as a decade of innovation bringing opportunity and growth. The Energy Policy Options paper<sup>53</sup> also strongly advocates innovation. Northern Ireland has a proud record of embracing new economic models and today we are world leaders in new industries such as advanced materials manufacturing, cyber security and ‘Fintech’ (Finance technology).

Traditional manufacturing is still a large part of our economy in sectors as diverse as aggregates processing and materials handling to food processing.<sup>54</sup> Our key export sectors must be supported as businesses pivot from fossil fuel hydro-carbons.

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<sup>50</sup> A Skills Strategy for Northern Ireland – Skills for a 10x Economy | Department for the Economy (economy-ni.gov.uk)

<sup>51</sup> <https://www.daera-ni.gov.uk/news/poos-published-vision-future-farming-policy-ni>

<sup>52</sup> A 10x Economy (economy-ni.gov.uk)

<sup>53</sup> <https://www.economy-ni.gov.uk/consultations/consultation-policy-options-new-energy-strategy-northern-ireland>

<sup>54</sup> Northern Ireland manufacturers over 40% of the worlds tracked mobile crushing and screening equipment employing over 8,000 people. The Northern Ireland food and drink processing sector is also very significant employing over 23,000 people with export sales of nearly £5.5bn.

Rising to climate and environmental challenges is imperative and essential for our international competitiveness and attractiveness. A progressive Northern Ireland at the forefront of these issues is one that external investors want.

The transition to a new economic and societal model will be disruptive. This will have consequences in terms of the types of jobs that people do and the opportunities associated with these. It is certain that jobs we do today will not be same as what we will need to do in the future. This innovation, as set out in 10x Economy, will be at the core of our transition to a green economic model.

Government has a key role to play in this. In previous eras and in other jurisdictions state funded research has given us the internet, mobile phone technology, space travel and developed nuclear energy. We recognise that **adequate funding and support for innovation, research and development is an important lever** in realising this potential.

**New skills will also be critical to support this transition** and allow innovation to flourish into delivery. The Skills Strategy consultation<sup>55</sup> recognises that transformational change in skills is required. We will work across government and with industry partners to ensure we build a pathway to deliver the skills, knowledge transfer and opportunities for learning/re-learning.

Creating a home grown workforce adapted to integrating seamlessly with emerging technologies will not only support businesses advance into new global markets, but will also empower our citizens by supporting them into secure well paid jobs. The ripple effect of this will be felt across commerce and communities throughout Northern Ireland, raising our global profile.

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<sup>55</sup> <https://www.economy-ni.gov.uk/sites/default/files/consultations/economy/skills-strategy-10x-economy-consultation.pdf>

## Providing leadership

### BUSINESSES AND COMMUNITIES

This transition is already happening, driven by the existential threat of climate failure as well as the public's response to this through changing consumer patterns. This will continue to happen regardless of government requiring it; however the pace of change is likely to be faster with government support and investment.

**Many communities and businesses in Northern Ireland are already playing their part** such as Wrightbus<sup>56</sup> and Artemis,<sup>57</sup> both recognised global leaders in low carbon technologies and significant contributors to the green economy. These organisations are strong examples of green growth in action, where they are transitioning from fossil fuel hydro-carbon to net zero based activities and creating investment and jobs along the way. As well as doing this in new sectors of our economy we can do this in traditional sectors such as agriculture, for example, by taking advantage of the opportunity to harvest green energy and fertiliser from animal nutrients whilst simultaneously reducing water and air pollution.



**Wrightbus** is leading the way in zero-emissions transport, with their world-first hydrogen double-decker. They recently won a contract to supply 20 Hydrogen Fuel Cell Electric and 80 Battery electric buses to Translink. This follows Translink's introduction of three Wrightbus hydrogen-powered double decker buses to passenger service in December 2020. These vehicles will only emit water, no greenhouse gases or other pollutants, and are the first of their kind in Ireland.

Hydrogen buses are just a stepping-stone towards the company's vision of the development of a green hydrogen sector using Northern Ireland's abundant indigenous wind resources. This will include the development of hydrogen hubs, initially in Belfast and Ballymena, for the production and distribution of hydrogen fuel and equipment for transport and industry. This will create jobs, **improve air quality and build a prosperous economy across Northern Ireland**, which aligns closely with the Executive's Green Growth Strategy.

<sup>56</sup> <https://wrightbus.com/>

<sup>57</sup> [https://www.artemistechnologies.co.uk/en/technologies/news/23\\_Artemis-Technologies-to-build-zero-emissions-ferries-following-60M-funding](https://www.artemistechnologies.co.uk/en/technologies/news/23_Artemis-Technologies-to-build-zero-emissions-ferries-following-60M-funding)



**Artemis Technologies** are based in Lisburn and are leading on a project to decarbonise the maritime sector by launching the world's first high speed zero emission passenger ferry and developing the technical and operational requirements for a maritime transport system of the future.

Artemis has developed a new hydrofoil, a wing-like appendage under the hull of a vessel, called the Artemis eFoiler™, which lifts a hull out of the water as it moves. The hydrofoil has been developed to be fitted to new vessels and retrofitted to older vessels. This is a complex endeavour and is truly transformative with the ability to reduce the energy consumption of conventional vessels by up to 90%. This reduction in drag means a lot less energy is used to propel the vessel forward. Artemis' design makes high speed and high range electric propulsion a commercial viability for the first time. By creating a truly electric powered vessel Artemis are helping the maritime industry to dramatically cut its carbon footprint.

Working with local universities and companies, comprising experts in the fields of aerospace, motorsport and yacht design, Artemis received £33 million funding from the UK Research and Innovation's flagship Strength in Places Fund to fast track the development of this important new technology. This is an example of how local innovation can help at a global scale by reducing environmental impacts while providing new highly skilled and highly valued jobs.





**Dale Farm** is a dairy co-operative based in Cookstown, supplied by approximately 1,300 farmers. At 5MW the solar farm is one of the largest private solar farms contributing to the dairy industry in the world. The 37 acre facility includes 15,000 solar panels.

The solar farm guarantees 20 years of green energy and estimates show that it can offset Dale Farm's carbon footprint by 20% and provide multi-million pound energy savings. The farm provided 3,839,430KWh of solar energy over the 2020 calendar year and at peak solar production during May the dairy plant ran entirely on solar power.

The company was recognised for its commitment to renewable energy by winning two awards at the 2018 Sustainable Ireland Awards. In addition to the reduction of Dale Farm's carbon footprint and utilising a sustainable energy source, the solar farm has created additional green support jobs. Kann O&M Ltd received funds from the DAERA Rural Micro Business Growth Scheme to purchase a Tractor Mounted Automated Wet Wash Brush to clean solar panels to ensure they work at optimal efficiency.



**Northern Ireland Water**, as one the largest user of electricity here, is committed to innovative renewable energy projects to reduce its expenditure on power and further its commitment towards net zero. It is estimated that the 24,000 solar panels at NI Water's Dunore solar farm saves around 2,000 tonnes of carbon every year and is expected to save over £500,000 annually in energy costs for the company by producing enough electricity to supply the power needs of one of Northern Ireland's largest treatment plants - Dunore Water Treatment Works in South Antrim. As well as meeting the energy needs of the Dunore treatment works, the project enables the company to contribute towards decarbonisation targets.



**Stream's Tully Biogas Plant**, located near Ballymena, is a unique anaerobic digestion facility that generates renewable energy from poultry litter as the sole feedstock and is the first plant of its type in the world to achieve this at large scale. The plant generates 3MW of renewable electricity which is enough to power about 6,000 homes. It is also helping address the challenge of managing poultry litter in Northern Ireland in a more environmentally friendly and sustainable manner as this facility is diverting phosphorus away from agricultural land. Instead the plant is supplying digestate fibre high in phosphorous to a major garden compost producer who is using it to displace peat in its products. In addition, the innovative combination of anaerobic digestion and nitrogen stripping technology is also helping reduce ammonia emissions from agriculture.

Large corporations are also committed to real change to drive climate action and the UK Government in its 2019 Green Finance Strategy<sup>58</sup> consulted on a proposal for mandatory climate-related financial disclosures by publicly quoted companies, large private companies and LLPs.<sup>59 60</sup> The goal of these disclosures is to support investment decisions aligned with the transition to a low-carbon economy.

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<sup>58</sup> <https://www.gov.uk/government/publications/green-finance-strategy>

<sup>59</sup> In 2017 the Taskforce on Climate-related Financial Disclosures chaired by Michael Bloomberg wrote to then Governor of the Bank of England Mark Carney setting their recommendations for helping businesses disclose financial-climate related information with a view to building "...a stronger, more resilient, and sustainable global economy".


<sup>60</sup> <https://www.gov.uk/government/consultations/mandatory-climate-related-financial-disclosures-by-publicly-quoted-companies-large-private-companies-and-llps>

## PUBLIC SECTOR LEADERSHIP

The public sector is sizeable in Northern Ireland. We need to use this to our advantage in leading the way on green growth. Whilst it is not the sole preserve of policy makers to tackle the climate crisis, governments (international, national, regional and local) have a key leadership role to play.

An effective and straightforward way to do this is through the budgets that our government allocates and through government's own spend. **Adopting a Green Growth aligned procurement strategy for all government spend can make a significant positive change.** This commitment, which builds on a CCC recommendation,<sup>61</sup> will be developed further in the Climate Action Plan. Some of this work is already underway, exemplified by recent contracts to purchase 100% renewable electricity to power the public sector.

Through the Energy Management Strategy and Action Plan to 2030<sup>62</sup> there is already a commitment to achieve a 30% consumption reduction compared to 2016-17 levels<sup>63</sup> on our built assets. The public sector also operates an extensive fleet of vehicles - from ambulances to maintenance vans. Building on the research and analysis undertaken for the Energy Management Strategy, we intend to ensure that our entire estate and fleet are delivering net zero operational carbon emissions.



**Public Sector Procurement.** The public sector is leading by example in contracting to have all government buildings supplied by 100% renewable electricity, generated mainly in NI. The contract to deliver this was signed in December 2020. Over time, it will deliver substantial savings to the public sector along with wider environmental benefits. This exercise is based on collaboration and partnership between the Department of Finance, the Department of the Economy and the Strategic Investment Board. The benefits of this initiative are clear - delivering savings and lowering emissions.

<sup>61</sup> <https://www.theccc.org.uk/wp-content/uploads/2021/06/Progress-in-adapting-to-climate-change-2021-Report-to-Parliament.pdf> table 1 recommendation 1 p 27

<sup>62</sup> <https://sibni.org/app/uploads/2019/03/Energy-Management-Strategy-March-2019.pdf>

<sup>63</sup> equivalent to 460 ktCO<sub>2</sub>e

No single policy can deliver cross-economy emissions reductions - we know it will be a combination of sectoral interventions, with co-ordinated regulation and standards focused on low carbon options. **Regulations are an effective tool, among many potential policy levers, to improve efficiency in the main emitting sectors including energy networks, agri-food, transport and the built environment.** It can be used to incentivise those involved to improve the efficiency and install low carbon solutions in new and existing buildings.

## Working in partnership across governments

### UK & INTERNATIONAL

Tackling Climate Change will require collaboration at all levels. **We will work with the UK government** to ensure climate actions and growth opportunities are shared equitably by all citizens. As a demonstration of our international commitment, **along with other devolved administrations in the UK, we have joined the Under2 Coalition.**<sup>64</sup> The Under2 Coalition brings together more than 220 governments representing more than 1.3 billion people and 43% of the global economy. Members are committed to keeping global temperature rises to well below 2°C with efforts to reach 1.5°C.

We also share this island and while there are political boundaries there are no climate boundaries. It will be essential **to work closely with the Irish Government** to ensure our climate plans are complementary. We commit to working through the relevant bodies to ensure systematic and ongoing collaboration between jurisdictions.

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<sup>64</sup> <https://www.theclimategroup.org/under2-coalition>

Collaboration between central and **local government** is also critical. There are good examples from sectors such as waste, where strong cooperation and collaboration between central and local government has delivered successful outcomes. Councils across Northern Ireland have already been proactive in planning and delivering on climate action and the environment. In December 2020, Belfast City Council published its Belfast Resilience Strategy - the city's first climate plan.<sup>65</sup> This ambitious plan sets out a total of 30 transformational programmes to transition Belfast to an inclusive, zero-emissions, climate-resilient economy in a generation. Belfast also has a Climate Commission. Co-chaired by Belfast City Council and Queen's University, the Belfast Climate Commission is one of three city-based climate commissions across the UK (Belfast, Edinburgh and Leeds).

Derry City and Strabane District Council has published its Green Infrastructure Plan<sup>66</sup> and in 2020 became the first Council in Northern Ireland to adopt a Climate Change Adaptation Plan.<sup>67</sup> Other councils are also showing leadership. Fermanagh and Omagh Council recently published a consultation on their Climate Change and Sustainable Development Strategy. Councils such as Mid and East Antrim are key participants in the development of green-tech jobs in Ballymena, including those at the Wrightbus facility, as well as advocating for the establishment of a Hydrogen Training Academy.

There will also be significant opportunities through City Deals<sup>68 69</sup> as these are shaped and evolve over the coming years. Sectoral strengths such as agri-food and life sciences are already highlighted as opportunities in these deals and we see sustainability and inclusivity at their core.

We will build on these relationships to strengthen the cooperation between local and central government on Green Growth.

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<sup>65</sup> <https://www.belfastcity.gov.uk/News/Belfast-launches-its-first-climate-plan-as-report>

<sup>66</sup> <https://www.derrystrabane.com/GI>

<sup>67</sup> <http://meetings.derrycityandstrabanedistrict.com/ieListDocuments.aspx?CId=187&MId=1594&Ver=4> <https://www.fermanaghomagh.com/app/uploads/2020/07/200703-CompressedCCSD-Strategy.pdf>

<sup>68</sup> <https://www.derrystrabane.com/citydeal>

<sup>69</sup> <https://www.brcd-innovation.co.uk/>



## Case Study

In April 2019, **The Electric Storage Company** installed a 15KW battery storage system on behalf of **Derry City and Strabane District Council** in the Irish Street Community Centre located in the Waterside, Derry. The system was linked to 12KW of Solar PV panels.

The aim of the project was to lower the energy costs for the centre using renewables and to provide a level of back up in the event of an electricity outage. The system is also remotely monitored via the Customer Portal App which provides system performance information and live data displayed on a dashboard format.

During the first year 2019/20 the system had saved 45% of electricity costs for the community centre. During the second year 2020/21 when Covid led to the centre being closed at times the system provided 60% of the building's electricity requirements.

## Investment and Funding

### INVESTMENT REQUIRED

Delivering this change will require significant long term investment - by government, by the private sector and by individuals.

Initial analysis on potential scale of investment required has been undertaken by the CCC in its Sixth Carbon Budget and also by the UK Government's Office of Budget Responsibility (OBR) in its July 2021 Fiscal Risks Report.<sup>70</sup>

In its Sixth Carbon Budget, the CCC estimates extra investment rising to around £1.3 billion annually from 2030 will be needed in Northern Ireland to meet our 2050 emissions targets in their 'Balanced Pathway' scenario. The majority is expected to come from the private sector, but the public sector contribution will be significant. While capital costs and investment will need to be heavily 'front-loaded', operational savings from fuel costs and increased efficiency will help offset investment costs in later years. A cost will however remain and the CCC estimates this additional cost each year (annualised resource cost) to be in the region of £300 million by the early 2030s. This represents a net additional cost for climate action of less than 1% of Northern Ireland's Gross Domestic Product (GDP), which is around £49 billion. Further work will be carried out to determine the proportion of public and private sector expenditure needed and the likely timing of such spend.

To secure this investment, we need to get much better at accessing emerging and new funding opportunities. This will mean taking a new approach to competing in UK wide funding. Northern Ireland also remains eligible for EU structural funding support and schemes like the Emissions Trading Scheme (ETS) offer additional opportunities. We have seen how other countries have maximised the use of such funding to drive economic growth, remove barriers and help redress regional imbalance. An example we too will follow, proactively exploring other national and global funding sources.

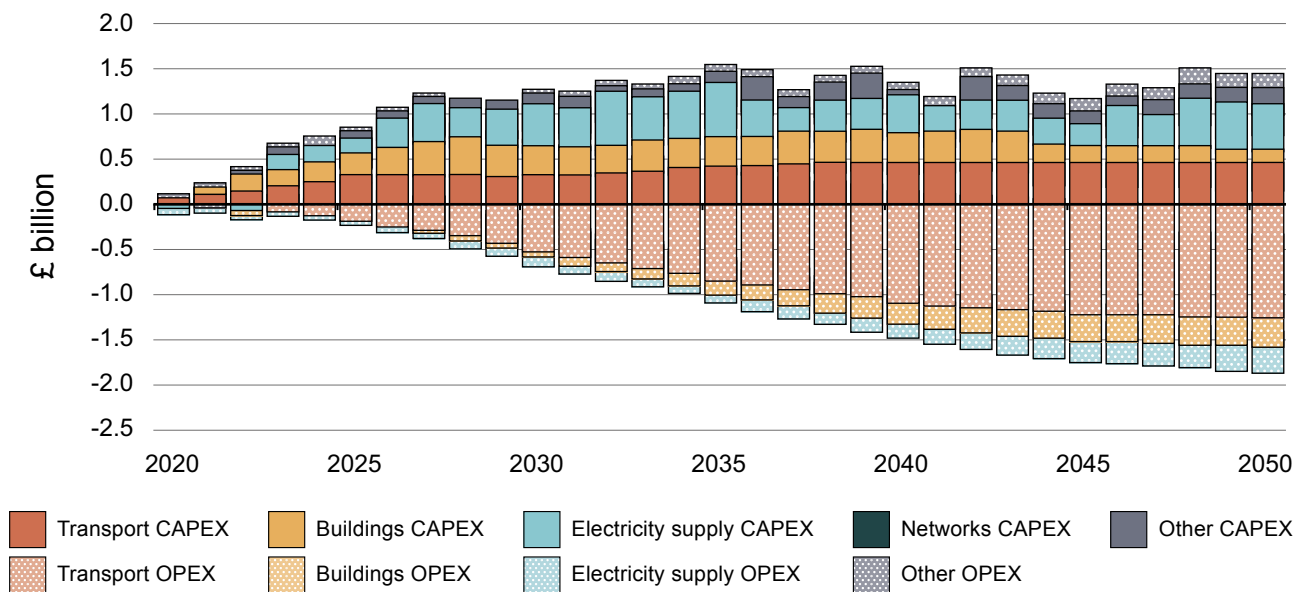
In October 2021, Her Majesty's Treasury published 'Net Zero Review: Final Report.'<sup>71</sup> The Review considers the potential exposure of businesses and households to the transition, and highlights factors to be taken into account when designing decarbonisation policy. We will ensure that the implications for Northern Ireland are appropriately considered and engagement with Treasury and BEIS officials is ongoing.

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<sup>70</sup> [https://obr.uk/docs/dlm\\_uploads/Fiscal\\_risks\\_report\\_July\\_2021.pdf](https://obr.uk/docs/dlm_uploads/Fiscal_risks_report_July_2021.pdf)

<sup>71</sup> [NZR\\_-\\_Final\\_Report\\_-\\_Published\\_version.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/101111/NZR_-_Final_Report_-_Published_version.pdf) (publishing.service.gov.uk)

## CCC estimate of CAPEX & OPEX\* - NI Balanced Pathway



Source The numbers behind the budget: Six ways to explore the Sixth Carbon Budget dataset - Climate Change Committee (theccc.org.uk)  
 Notes \* after double counting reconciliation

Cost charts: Capex in one sector (e.g. electricity) can be opex in another sector (e.g. electric transport). In these CAPEX and OPEX charts, we have removed double counting between energy supply and end-use sectors, allowing for more accurate depiction of the net costs of the transition.

## Funding opportunities

To secure this investment, we need to get much better at **accessing emerging and new funding opportunities**. This will mean taking a new approach to competing in UK wide funding. Northern Ireland is also in a unique position in the UK where it can continue to benefit from EU structural funding. We have seen how other nations and countries have used these funding opportunities to drive economic growth, remove barriers and help redress regional imbalance, and will strive to maximise all available funding opportunities.

The HMT Net Zero Review recognises that fiscal policy within the UK will have to change, for example as we move to electric vehicles the revenue obtained from fossil fuel /vehicle excise duty levy will reduce. Therefore the Government will need to consider how to offset this. We will ensure that the implications for Northern Ireland are appropriately considered during this process.

## Emissions Trading Scheme

Emissions trading schemes are designed to reduce greenhouse gas emissions from energy intensive industries and the power sector into the atmosphere. It does this by limiting the amount of permissible greenhouse gas emissions<sup>72</sup> from these installations by setting an annual maximum cap for emissions for the whole scheme which decreases each year. Northern Ireland has a dual system of emissions trading since EU exit, having participants in the UK ETS (16 installations) and EU ETS (5 electricity generators).<sup>73</sup>

In starting up the new UK ETS on 1st January 2021, the UK Government set an initial cap at -5% of the EU ETS scheme, to demonstrate early ambition and to allow the new UK carbon market to become established. The UK Government has now indicated its intention to carry out a review of the UK ETS, which will include consideration of the level of the cap and trajectory to align with UK Government net zero objectives, and the potential for expansion to bring other sectors within the scope of the scheme.

We will **proactively consider opportunities to maximise funding opportunities for climate action from national and international sources**. We will work closely with the UK Government and the other Devolved Administrations on implementation and review of the UK Emissions Trading Scheme, to ensure alignment with NI's climate ambition and emissions trajectory and to maximise any opportunities for NI from the cap and trade scheme.

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<sup>72</sup> In emissions trading, greenhouse gases are referred to as carbon dioxide equivalent CO<sub>2</sub> (e)

<sup>73</sup> The latter is to preserve the Single Electricity Market (SEM), with a common carbon price on the Island of Ireland, by virtue of the Article 9, Annex 4 of the NI protocol.

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**Have your say**  
To leave your comments  
**CLICK HERE**



# Measuring and monitoring our progress.

## Executive Commitments

10

### *MEASURING PROGRESS*

We will ensure sound governance and reporting arrangements for the delivery of the Green Growth Strategy and Climate Action Plan by recommending that the Assembly establish a Standing Committee on Climate Action and agree a monitoring framework for measuring progress.

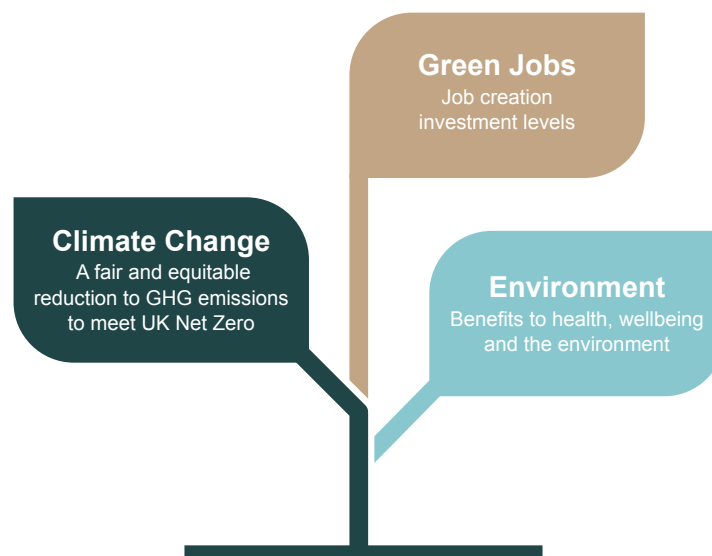
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## Measuring progress

Having set out our Green Growth vision and principles we will continue to work to agree indicators to measure success. The benefits from this Green Growth Strategy will be wide-ranging with direct benefits in green jobs, emissions reduction and improved environment, and in-direct benefits for health and wider societal gains. Citizens must be able to see the benefits from making low-carbon choices and enhancing the environment.

We will work to develop appropriate indicators and measures of success in collaboration with key government policies and strategies for example; the Programme for Government and the Investment Strategy.



It is also important that our actions are taken with specific outcomes in mind. At a macro level these are obviously about climate action, the environment and green jobs. We will also develop further outcomes at more granular levels to ensure that interventions are targeted at the right areas to achieve the right outcomes. We will apply these same principles to target setting.

Consistent with the CCC carbon budget progress reporting, it is vital that Northern Ireland has clear and robust monitoring arrangements. Measuring against agreed targets means we know how we are progressing. This is done by the UK government through 'carbon budgets'.<sup>74</sup> Over time, Northern Ireland will move to align with these carbon budget periods.

<sup>74</sup> <https://www.gov.uk/guidance/carbon-budgets>. A carbon budget places a restriction on the total amount of greenhouse gases the UK can emit over a 5-year period. The UK is the first country to set legally binding carbon budgets. The budgets demonstrate the trajectory that is needed to meet its final target of net zero. Through regular reporting it is transparent to all if the UK is on course to meet its net zero target and this will be done most efficiently by meeting its carbon budgets.



## Governance and Monitoring

We need to **co-ordinate efforts with all parts of government (central and local) in relation to climate action and the environment.** This Green Growth Strategy provides a framework for us to do so. Partnership and effective co-ordination across government departments is essential. Inter-departmental arrangements established to help develop this Green Growth Strategy will be maintained as appropriate. These are useful fora for bringing together conversations about climate, economy, society and the environment.

Strong governance will be key to the delivery of this Green Growth strategy. Under the UK Climate Change Act 2008 the CCC produces progress reports on emissions reductions and adaptation at UK level. Wales and Scotland, under their own local national legislation, commission the CCC to undertake additional reporting. Subject to the final form of Northern Ireland Climate Change legislation adopted, it is envisaged that the CCC would be further utilised to undertake Northern Ireland level reporting in terms of emissions reductions achievement against an Act's targets, advice on NI specific carbon budgets, adaptation planning advice, and mid-term and end of programme reviews.

We also recommend that the Assembly consider establishing a **Climate Action Assembly Standing Committee** to ensure effective oversight. This would allow for representation from across the political spectrum, challenge and enable scrutiny of climate policy and could hold departments to account as appropriate, consistent with the functions of an Assembly Standing Committee.<sup>75</sup> It would augment existing departmental committee structures and ensure that expert advice is considered and acted upon.<sup>76</sup>



<sup>75</sup> <http://www.niassembly.gov.uk/assembly-business/committees/>

<sup>76</sup> In the same way the function of the Public Accounts Committee is to examine public spending with the benefit of hindsight, to highlight good practice and poor value for money, and to recommend improvements to the stewardship of taxpayers' money, the Climate Action Committee would perform a similar role for climate activities.

# Next steps.







7

**This strategy represents a significant step forward for Northern Ireland as we move from a high to a low emissions society and as we balance climate action with environmental and economic considerations. Balancing these three elements may add complexity to the challenge of addressing climate change but we also believe that the green growth approach is right for Northern Ireland.**

This strategy outlines the level of our ambition, the aspirations we have for society here and the commitments we are making. As an Executive we want to inspire and support and, where necessary, mandate other sectors and individuals to join us as we progress the green growth agenda through this decade and beyond. This strategy sets out our commitments, our vision and our principles. We are adopting a phased approach and this strategy will be followed up with associated Climate Action Plans.

These Climate Action Plans are equally as important and as such our first action plan will be published as soon as possible after this strategy. It will focus on the immediate actions we need to take across all individual sectors to meet sector-specific greenhouse gas emission targets in line with local legislative targets and the UK's net zero by 2050 ambition. The first Climate Action Plan will set us on the right trajectory to achieve our green growth vision, but a series of successive plans will be required to get us there. Each Climate Action Plan will have a medium term focus (possibly 3-5 years) with clear and challenging but achievable sectoral targets. Each one will be informed by the progress made during the previous plan period, developments in technology and new evidence we have gathered. Directed by the Green Growth Strategy, the Climate Action Plans will break down achieving the long-term strategic outcomes into shorter term programmes of work.

We are committed to developing the systems used for monitoring and reporting on the impact of the strategy and plan so that any adjustments made in the context of future reviews are reliably informed. The first iteration of both the Green Growth Strategy and Climate Action Plan will be periodically reviewed to ensure they are relevant and up-to-date. This will also ensure that early lessons learned from our experience in Northern Ireland and from our collaborations with other jurisdictions are identified and incorporated.

**We know that the time to act is now and that radical changes, some of which will be difficult, will be needed. That is why your views, your responses to the consultation on this draft strategy, are important in helping to shape the published version.**

The following page contains some questions you might ask relating to each section of this strategy.

## Consultation Questions

We urge you to review this strategy and have your say on Northern Ireland's Green Growth approach. Your views and knowledge are vital and we want to hear them.

### Section 1

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- Q1 - Is our Vision 2050 the right vision? If not what would you change?**
- Q2 - Are our Green Growth principles right? If not, what should be included / taken out and why?**

### Section 2

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- Q3 - Are we right to adopt a Green Growth approach bringing together green jobs, climate action and the environment?**
- Q4 - Is a statutory Green Growth test needed to ensure we put climate action, environment and green jobs at the heart of policy development?**
- Q5 - Should Green Growth be one of our top Executive investment and budgetary priorities?**

### Section 3

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- Q6 - Do we need specific targets for each sector set out in Climate Action Plans? If yes, how would this be brought about; and if no, how should we ensure we drive change?**
- Q7 - Do you agree on the definition of the sectors?**

### Section 4

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- Q8 - Do you agree with the adoption of a Just Transition approach? If not, what approach should we be taking and why?**

**Q9 - How do we ensure this Just Transition - is a Commission the right way forward?**

**Q10 - How do we make sure the public and all stakeholders (including young people) are actively engaged with Green Growth? Is a Citizen Assembly Panel the right structure?**

## **Section 5**

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**Q11 - How can we work most effectively with businesses, local government and organisations across Northern Ireland to maximise and deliver our decarbonisation and Green Growth efforts?**

**Q12 - How should the public sector be leading by example on Green Growth?**

## **Section 6**

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**Q13 - What indicators should we use to measure the success (or otherwise) of our Green Growth strategy?**

**Q14 - How can there be effective oversight of Green Growth - should there be a dedicated Assembly Committee, or independent scrutiny?**

## **Section 7**

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**Q15 - Please add any other comments or suggestions you think are relevant to developing and delivering our Green Growth strategy.**

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**Have your say**

To leave your comments  
**CLICK HERE**





# Annex





## Annex 1 : Glossary

TERM	DEFINITION
Carbon budget	A carbon budget places a restriction on the total amount of greenhouse gases the UK can emit over a 5-year period. The UK is the first country to set legally binding carbon budgets. Under a system of carbon budgets, every tonne of greenhouse gases emitted between now and 2050 will count. Where emissions rise in one sector, the UK will have to achieve corresponding falls in another.
Carbon credits	A permit which allows a country or organization to produce a certain amount of carbon emissions and which can be traded if the full allowance is not used.
Carbon leakage	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. The risk of carbon leakage may be higher in certain energy-intensive industries.
Circular economy	A Circular Economy is a systemic approach to economic development that reduces the overall demand for resources by designing things differently and keeping stuff in use for longer. By designing things differently, we can reduce overall demand for raw materials, reduce waste generated and create things that retain value throughout their entire life cycle. It seeks to return bio-based materials (e.g. food) back to the earth to restore ecosystems and increase nature's ability to absorb carbon. By keeping technical and natural materials in circulation for longer at their highest value we retain their embodied carbon and consequently reduce GHG emissions.
Clean Environment	Clean environment means clear air and water, more sustainable land use; improved habitats and greater biodiversity.

TERM	DEFINITION
Climate Action	This means reducing greenhouse gas emissions to zero, or as close to zero as possible and offsetting any remaining emissions by increasing the ability of technology and our environment to capture carbon (e.g. through forestry). The UK Government has committed to Net Zero by 2050.
Climate Action Plan	The Climate Action Plan will outline how each sector will reduce its emissions in accordance with the targets and pathways outlined in this strategy. It will seek to adopt a holistic approach, balancing climate action, the environment and the economy.
Climate Change	A change in the state of the climate that can be identified (e.g. by using statistical tests) by changes in the mean and/ or the variability of its properties and that persists for an extended period, typically decades or longer.
Climate Change Committee (CCC)	The Climate Change Committee (CCC) is an independent, statutory body established under the Climate Change Act 2008. Our purpose is to advise the UK and devolved governments on emissions targets and to report to Parliament on progress made in reducing greenhouse gas emissions and preparing for and adapting to the impacts of climate change.
CO <sub>2</sub> Equivalent	A carbon dioxide equivalent or CO <sub>2</sub> equivalent, abbreviated as CO <sub>2</sub> -eq is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.
Data modelling	Using data to consider the factors that drive the climate, and develop projections about how these might change in the future.
Decarbonise/ decarbonisation	Process by which countries, individuals or other entities aim to achieve zero fossil carbon existence. Typically refers to a reduction of the carbon emissions associated with electricity, industry and transport.



TERM	DEFINITION
Forests for our Future	DAERA's Forests for Our Future programme aims to plant 18 million trees or 9,000 hectares of new woodland over the next 10 years to help our environment and economy.
Green Growth Strategy	The Green Growth Strategy is a multi-decade strategy which will set out the long-term vision, ambition and targets and a solid framework for tackling the climate crisis in the right way.
Green Growth Test	A test that will ensure proposals that have 'adverse impacts' on emissions reductions and the Green Growth principles are identified and the relevant authority will have a duty to consider how these might be reduced.
Green jobs	Clean environment means clear air and water, more sustainable land use; improved habitats and greater biodiversity.
Greenhouse Gas	Gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of terrestrial radiation emitted by the Earth's surface, the atmosphere itself, and by clouds. This property causes the greenhouse effect. Water vapour (H <sub>2</sub> O), carbon dioxide (CO <sub>2</sub> ), nitrous oxide (N <sub>2</sub> O), methane (CH <sub>4</sub> ) and ozone (O <sub>3</sub> ) are the primary GHGs in the Earth's atmosphere.
Just transition	A just transition is about moving to an environmentally sustainable economy without leaving workers in polluting industries behind. It aims to support good quality jobs and decent livelihoods when polluting industries decline and others expand, creating a fairer and more equal society.
Low carbon economy	A low-carbon economy (LCE) or decarbonised economy is an economy based on low-carbon power sources that therefore has a minimal output of greenhouse gas (GHG) emissions into the atmosphere, specifically carbon dioxide.



TERM	DEFINITION
Low carbon power capacity	The 2014 Intergovernmental Panel on Climate Change report identifies nuclear, wind, solar and hydroelectricity in suitable locations as technologies that can provide electricity with less than 5% of the lifecycle greenhouse gas emissions of coal power.
Natural capital Assets	Natural capital assets are stocks of certain elements of nature that deliver services (often referred to as ecosystem services) that have value to society. For example, a forest natural capital asset provides timber, carbon sequestration, amenity and recreation opportunities, habitat for biodiversity etc.
Net Zero Carbon	Conditions in which any remaining anthropogenic carbon dioxide (CO <sub>2</sub> ) emissions are balanced by anthropogenic CO <sub>2</sub> removals over a specified period.
Net Zero emissions	Net-zero emissions are achieved when emissions of greenhouse gases (GHGs) to the atmosphere are balanced by anthropogenic removals.
Overseas consumption footprint	The footprint of the UK's consumption is spread globally and encompasses the impacts of goods produced and processed overseas for import to the UK.
Renewable energy	Renewable energy is useful energy that is collected from renewable resources, which are naturally replenished on a human timescale, including carbon neutral sources like sunlight, wind, rain, tides, waves, and geothermal heat. This type of energy source stands in contrast to fossil fuels, which are being used far more quickly than they are being replenished.
Sixth Carbon Budget	The UK's path to Net Zero. The Sixth Carbon Budget, required under the Climate Change Act, provides Ministers with advice on the volume of greenhouse gases the UK can emit during the period 2033 - 2037.

## Annex 2 : CCC Sectors

CCC SECTOR	SCOPE
Surface transport	Emissions from road transport and rail
Fuel supply	<p>Emissions from energy production activities such as mining, refining, manufacturing and distribution of fossil fuels. Direct emissions from the conversion facilities for new bioenergy vectors (e.g. biojet, bioLPG, biohydrogen) and biomethane injection into the gas grid to offset fossil gas.</p> <p>Direct emissions from future production of low-carbon hydrogen, low-carbon ammonia and synthetic fuel production for energy use are included in this sector. However, our best estimate of emissions from these is currently zero.</p>
Manufacturing and construction	Emissions resulting from industrial processes, fuel combustion in the manufacturing and construction industries, and off-road mobile machinery.
Residential buildings	Emissions from residential properties, including from consumer product use. Primarily consists of fuel combustion for heating/cooking.
Non-residential buildings	Emissions from the combustion of fuel in the commercial sector and in public sector buildings.
Electricity supply	Direct emissions from electricity generation, excluding those from combustion of wastes.
Agriculture	Emissions of greenhouse gases from livestock, agricultural soils (excluding carbon stock changes which are included in the LULUCF sector) and agricultural machinery.

CCC SECTOR	SCOPE
Land use, land-use change and forestry (LULUCF)	Emissions/removals of CO <sub>2</sub> from changes in the carbon stock in forestland, cropland, grassland, wetlands, settlements and harvested wood products, and of other greenhouse gases from drainage (excl. croplands and intensive grasslands) and rewetting of soils, nitrogen mineralisation associated with loss and gain of soil organic matter, and fires. Because the impact of biomass harvest on carbon stocks in ecosystems is included in this sector, any emissions of CO <sub>2</sub> from burning biomass (regardless of the country of origin) are excluded from other sectors to avoid double counting them.
Aviation	Emissions from domestic, international and military flights
Shipping	Emissions from domestic, international and naval shipping
Waste	Emissions resulting from the treatment and disposal of solid and liquid waste, for example from landfill, incineration and composting. Emissions from energy-from-waste (EfW) are included in this sector.
F-gases	All emissions of hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulphur hexafluoride (SF <sub>6</sub> ) and nitrogen trifluoride (NF <sub>3</sub> )
Removals	Emissions from engineered greenhouse gas removals, including combustion of bioenergy with carbon capture and storage (BECCS), Direct Air Capture of CO <sub>2</sub> with storage (DACCS) and the use of wood in construction.

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