Annual Review 2024

Cross-sectoral Review

CLIMATE CHANGE ADVISORY COUNCIL

Annual Review 2024: Cross-sectoral Review

Submitted to the Minister for the Environment, Climate and Communications on 18 October 2024

Climate Change Advisory Council
McCumiskey House
Richview, Clonskeagh Road, Dublin 14, D14 YR62

Tel: 01 2680180

Email: info@climatecouncil.ie

www.climatecouncil.ie

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George Hussey

Jodie Colgan

Phillip O'Brien

Stephen Flood

Bryn Canniffe

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Summary for All

In this eighth part of the 2024 Annual Review, the Climate Change Advisory Council says that progress to reduce emissions is not sufficient for Ireland to meet its national and EU climate obligations. The cost of failing to meet EU targets could exceed €8 billion for the period up to 2030, with exact costs dependent on progress in reducing emissions across EU Member States and on future prices. Reliance on fossil fuels needs to end, and significant and concerted action will be needed across sectors to meet climate targets.

Key recommendations

- To end Ireland's reliance on fossil fuels the Government should:
  - cease subsidising fossil fuel consumption and target financial support for those least able to move away from fossil fuels and those most at risk from the impacts of climate change,
  - increase funding and make it more accessible to enable and accelerate the rapid uptake of low-carbon technologies and alternatives across all sectors.
- The revised National Planning Framework needs to be implemented swiftly and in full to support the expansion in wind and solar power necessary to meet renewable energy targets and to reduce emissions associated with new building developments and the transport system.
- To ensure a fair and sustainable transition, the Government should publish an implementation plan for the measures adopted through the European Green Deal.
- The Government must complete the Land Use Review and provide an implementation plan to protect nature and restore land in support of a sustainable, resilient and biodiversity-rich economy.
- There needs to be a programmed re-evaluation of the levels of carbon budgets so that they remain coherent with Ireland's emissions statistics, which are constantly being improved and updated.
- The Government must fund the national climate observation system to support its contribution to the Global Climate Observing System and to develop a national climate event attribution capability to better understand how climate change affects weather events.

Abbreviations

EPA	Environmental Protection Agency
ETS	Emissions Trading System
IGEES	Irish Government Economic Evaluation Service
LULUCF	Land Use, Land Use Change and Forestry
NECP	National Energy and Climate Plan
UNFCCC	United Nations Framework Convention on Climate Change
WEM	with existing measures
WAM	with additional measures

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Key observations

- Ireland's emissions fell overall in 2023, and across almost all sectors, bringing it closer to achieving the carbon budget 2021–2025 targets, but not to the extent necessary to significantly increase the likelihood of meeting the targets for carbon budget 2026–2030.
- Emissions projections published by the Environmental Protection Agency outline the difficulties that Ireland is likely to face in meeting national and EU emissions objectives. The costs of failing to meet EU objectives are significant and are projected to exceed €8 billion in certain scenarios. There is also growing concern about the availability of credits required to demonstrate compliance given that other Member States are also having difficulties meeting their targets.
- The Council welcomes the EU Regulation on nature restoration that came into effect on 18 August 2024, and recognises that reaching the mandated restoration targets within a well-designed and well-implemented National Restoration Plan for nature will play a key role in achieving climate and biodiversity objectives by 2050.

Key recommendations

1. Ireland needs to quickly reduce and ultimately eliminate its reliance on fossil fuels. This change can be enabled by:
   - Removing fossil fuel subsidies in a clearly timed manner that is progressive and protects the most vulnerable and those that are most impacted. To ensure a Just Transition, the Government must ensure that targeted financial support is in place to transition away from fossil fuel-intensive activities and to support those most at risk to adapt to the changing climate.
   - Financing climate actions that replace the use of fossil fuels with lower carbon alternatives. The Council reiterates its call to increase the level of funding available for consumers and businesses to finance the upfront capital costs that are hindering the uptake of new technologies. This market failure can be addressed by greater Government subsidisation of well-understood alternatives such as electric vehicles and heat pumps and grant funding of the retrofitting of buildings with a particular focus on lower income households.
2. The Government must conclude the National Planning Framework review this year. The successful implementation of a renewed National Planning Framework is crucial for Ireland to achieve its National Climate Objective. To be effective, the National Planning Framework must be strengthened beyond the current draft to address key areas such as ensuring that Ireland's full renewables potential is achieved, managing development for genuine compact growth to help enable climate solutions such as district heating, active travel modes and public transport, and preparing for the impacts of climate change such as sea level rise while further developing the potential for the implementation of nature-based solutions. The Government needs to

regularly measure and report on progress across these and other indicators to ensure accountability and success.

3. The Government needs to publish an implementation plan for the full suite of measures adopted as part of the European Green Deal to ensure a sustainable and Just Transition.
4. The Government must complete the Land Use Review and set out a clear and detailed implementation plan of actions necessary to deliver the diverse range of bioeconomy and ecosystem services required to maintain a sustainable, resilient and biodiversity-rich economy. The implementation plan should be consistent with the long-term National Climate Objective of climate neutrality by 2050 and include nature protection and the restoration of land for biodiversity.
5. The Council welcomes the process for resolving the issues in respect of unallocated savings in 2025, as documented in the Climate Action Plan 2024, and stresses the importance of the taskforces being properly set up and their work being concluded on time and in full.
6. Informed by the approach taken by the EU, the Council proposes to undertake routine reviews of the agreed targets under the Climate Act 2021 to ensure that these targets take into account recent technical developments in inventory methodologies. The Climate Act envisages the potential for such reviews but without specifying a timeframe. Such re-assessment should be programmed to occur in tandem with the end of carbon budget period reviews (e.g. April 2027[a] and every 5 years thereafter) and should have a retrospective as well as a forward-looking focus.
7. The Government must ensure that the funding and necessary support are in place to sustain and improve the national climate observation system, consistent with a sustained national contribution to the Global Climate Observing System. The Council encourages the development and operation of a national climate event attribution capability to inform the public and policymakers of which events are being made more or less likely because of ongoing climate change.

a Point at which the 2021–2025 inventories are finalised.

1. Introduction

At the end of 2023 the United Nations Framework Convention on Climate Change (UNFCCC) concluded the first scheduled global stocktake of the Paris Agreement,[1] a process that enables Parties to the Paris Agreement to assess whether they are collectively on track towards fulfilling its objectives. The Parties concluded that, while there is clearly progress being made, the world is not on track to reach the overriding objective of the Paris Agreement's long-term temperature goal of holding temperature increases to well below 2°C and striving to keep them below 1.5°C. The global stocktake furthermore highlighted that there is also significant progress still to be made across a wide range of additional themes of the Paris Agreement, including finance and adaptation.

In the EU, the European Scientific Advisory Board on Climate Change[2] has recommended targets in the 90–95% range for reductions in net greenhouse gas emissions by 2040 to stay within an overall budget of 11–14 Gt CO_2 eq for the period 2030–2050 in aggregate.

Nationally, there was some encouraging news, with reductions evident in emissions across most sectors in 2023, according to the Environmental Protection Agency (EPA) provisional inventories published in July 2024.[3] While this is positive news, much more urgent action is still required from the Government if Ireland is to achieve its climate change objectives. *Ireland's Climate Change Assessment* was also published in 2023; this is a significant body of work involving the Government and academia.[4]

2. Indicators

The Economic and Social Research Institute[5] reported growth in modified domestic demand of 0.5% in 2023 and projects growth of 2.2% and 2.9% in 2024 and 2025, respectively. With the domestic economy being close to capacity,[6] ongoing labour market constraints will be significant with implications for delivery of the National Development Plan and other infrastructure investments. This is a particular constraint in the construction sector, with competing objectives for housing delivery, retrofits, public transport infrastructure and energy infrastructure.[7] It is estimated that to deliver the required energy infrastructure, an additional 24,000 construction workers will be needed up to 2030.

The Economic and Social Research Institute has also cautioned that fiscal policy through Budget 2025 will need to be careful not to exacerbate capacity constraints and lead to inflationary pressures and recommends that expenditure should be focused on capital investment. Likewise, the Council has recommended greater support for upfront capital investment in sustainable technologies (such as heat pumps and electric vehicles), and stressed the need for grant funding for retrofitting the built environment with a particular focus on low-income households.

In the absence of significant additional urgency and actions across all sectors, Ireland is unlikely to comply with its obligations under the EU Effort Sharing Regulation and recast Energy Efficiency Directive. A greater focus on policies that seek to balance the impacts of these pressures on Ireland's overall emissions will be required.

Table 1: Selected economy-wide indicators of progress on climate action and macro-economic drivers of emissions.
(Sources: Ireland's Provisional Greenhouse Gas Emissions 1990–2023,[3] CSO population estimates,[8] SEAI National Energy Balance 2024,[9] CSO National Accounts,[10] and CSO fossil fuel subsidies.[11])

GHG, greenhouse gas; GNI, gross national income; LULUCF, Land Use, Land Use Change and Forestry; Mtoe, megatonnes of oil equivalent.

Indicator	Unit	2018	2019	2020	2021	2022	2023
National emissions excluding LULUCF	Mt CO_2 eq	61.6	59.7	57.6	60.2	59.0	55.0
National emissions including LULUCF	Mt CO_2 eq	65.8	64.0	62.8	64.8	63.0	60.6
Change in national emissions relative to 2018 excluding LULUCF	%		−3.0	−6.5	−2.3	−4.2	−10.7
Change in national emissions relative to 2018 including LULUCF	%		−2.6	−4.6	−1.4	−4.2	−7.8
Annual change in national emissions excluding LULUCF	%		−3.0	−3.6	4.5	−2.0	−6.8
Annual change in national emissions including LULUCF	%		−2.6	−2.0	3.3	−2.8	−3.8
National CO_2 emissions including LULUCF	Mt CO_2	38.9	37.3	36.1	37.9	36.3	35.0
Population	Thousands	4,885	4,959	5,030	5,075	5,184	5,282
Total primary energy requirement	Mtoe	171	170	155	160	167	164
Modified GNI at constant prices	€m	225,476	230,376	224,004	255,219	266,979	280,231
GHG emissions intensity (GHG/GNI)	kt CO_2 eq per €m	0.29	0.28	0.28	0.25	0.24	0.22

Table 1: Continued

Indicator	Unit	2018	2019	2020	2021	2022	2023
GHG emissions per capita	t CO_2 eq per capita	13.46	12.91	12.48	12.77	12.15	11.48
CO_2 emissions intensity (CO_2/GNI)	kt CO_2 per €m	0.17	0.16	0.16	0.15	0.14	0.13
CO_2 emissions per capita	t CO_2 per capita	7.97	7.52	7.17	7.46	7.01	6.63
Fossil fuel subsidies	€m	3,266	3,100	2,417	2,779	4,678	

3. Inventories and projections

3.1. Emissions inventory

The EPA provisional inventories for the period 1990–2023 demonstrate that there was some progress made in 2023, including a welcome drop in emissions (excluding the Land Use, Land Use Change and Forestry (LULUCF) sector) of approximately 6.8% between 2022 and 2023, with reductions in emissions evident in all sectors except Transport and LULUCF (*Table 1* and *Table 2*).

Table 2: Sectoral emissions 2018–2023.
(Source: Ireland's Provisional Greenhouse Gas Emissions 1990–2023.[3])

N/A, not applicable; SEC, sectoral emission ceiling.

Sector	2018	2021	2022	2023	Total SEC/ budget	SEC/ budget used (%)	2023 emissions relative to 2018 (%)	2023 emissions relative to 2022 (%)
	Mt CO_2 eq							
Electricity	10.2	9.9	9.7	7.6	40	68	−26	−22
Transport	12.3	11.1	11.8	11.8	54	64	−4	0
Buildings (residential)	7.0	6.9	5.8	5.3	29	62	−24	−7
Buildings (commercial and public)	1.5	1.4	1.4	1.4	7	61	−9	−3

Table 2: Continued

Sector	2018	2021	2022	2023	Total SEC/ budget	SEC/ budget used (%)	2023 emissions relative to 2018 (%)	2023 emissions relative to 2022 (%)
					Mt CO_2 eq			
Industry	7.0	7.1	6.6	6.3	30	67	−10	−5
Agriculture	21.4	21.9	21.8	20.8	106	61	−3	−5
Other	2.1	1.9	1.9	1.8	9	63	−15	−5
LULUCF	4.2	4.6	4.0	5.6	N/A	N/A	34	41
Total excluding LULUCF	**61.6**	**60.2**	**59.0**	**55.0**	**N/A**	**N/A**	**−10.7**	**−6.8**
Total including LULUCF	**65.8**	**64.8**	**63.0**	**60.6**	**295**	**63.9**	**−7.8**	**−3.8**

Box 1: Technical review of carbon budgets based on EPA inventories

A significant technical adjustment to the estimate of emissions was implemented in the recent publication of the provisional emissions inventory 1990–2023.[3] Informed by improved, country-specific scientific knowledge, estimated Agriculture sector emissions have been revised downwards. Agriculture remains the largest source of emissions in Ireland, and this revision does not significantly change the understanding of the suite of mitigation measures available to the sector to reduce emissions. The EPA has always implemented and will continue to implement regular improvements to Ireland's emissions inventories, across all sectors, as scientific understanding improves. The most recent inventories included significant improvements to emissions estimates from sheep and livestock arising from the development of higher tier methodologies and greater data availability, respectively. In previous years for example, inventory improvements in the land sectors led to similar technical adjustments to emissions, with estimates for 2018 increasing from 4.8 Mt CO_2 eq to 6.3 Mt CO_2 eq. Thus, technical revisions to the inventory can be positive or negative in terms of understanding how source activities in Ireland impact emissions. That is to say that emissions inventories updates can either systematically increase or decrease emissions estimates with impacts throughout the historical series.

In the context of the Climate Action and Low Carbon (Amendment) Act 2021 and the existence of fixed carbon budgets, such emissions inventory updates represent a significant challenge. Such significant revisions to the inventory need to be addressed proactively to ensure that carbon budgets, and associated sectoral emissions ceilings, remain relevant and aligned with the National Climate Objective. Reductions in estimates of emissions will make both the

national carbon budgets and impacted sectoral ceilings easier to comply with and vice versa but do not reflect actual progress towards decarbonisation of Ireland's economy, which is what matters from a climate system perspective. Not updating carbon budgets and sectoral ceilings may well lead to perverse socio-economic outcomes.

This issue is neither new nor does it apply uniquely to Ireland. The EU[b] routinely conducts reviews of its agreed targets to ensure that they take into account recent developments in terms of inventory changes. For example, the precise annual targets for the years 2026–2030 under the Effort Sharing Regulation will not be finalised until after a detailed review of inventories, which is to take place in 2025.[12]

The Council therefore considers that a scheduled technical re-assessment of carbon budgets based on inventory methodological changes only should become routine, on a 5-yearly basis, in line with common practice within the EU. It should also be triggered if changes in estimates of historical emissions (when finalised) are large enough to have a material effect on either the national carbon budgets or the sectoral ceiling for a given sector. The Climate Act 2021 envisages the potential for such reviews but without specifying a timeframe. To avoid undermining the carbon budgeting approach mandated under legislation, a technical review of current carbon budgets should be scheduled to occur at a minimum in tandem with the end of the previous carbon budget period review. It is envisaged under the Act that carry-forward or exceedances of carbon budgets should be considered and implemented on finalisation of the inventories for that carbon budget period. It would be pertinent at that point to ensure that any methodological changes to the inventories (of sufficient scale to have potentially changed the original calculations) are incorporated into the historical and future carbon budgets before those calculations are finalised, rather than maintaining the current situation in which such a change is possible but with no certainty as to when it might occur. The first such opportunity to make such adjustments will arise in April 2027 when the inventories for 2021–2025 are finalised and such a review should be scheduled to occur at a minimum every 5 years thereafter.

b The EU process is mandated in Regulation (EU) No. 525/2013, Articles 20 and 27, and follows through in subsequent updates/revisions to the regulations.[38]

3.2. Emissions projections

The EPA's most recent projections for the period 2023–2050 continue to illustrate the difficulty Ireland faces in delivering on the first two carbon budgets and sectoral emissions ceilings.[14]

Normally, the EPA projections are carried out under two different scenarios known as the with existing measures (WEM) and with additional measures (WAM) scenarios.[c] In respect of the carbon budgets the latest projections estimate that the first carbon budget will be exceeded by 14 Mt CO_2 eq (WAM) or 21 Mt CO_2 eq (WEM) (*Table 3*). This reflects an overall exceedance of 7% (WEM) or 5% (WAM). Projections for the second carbon budget present a starker picture, in which the exceedances modelled are 109 Mt CO_2 eq (WEM) or 67 Mt CO_2 eq (WAM). This reflects an overall exceedance of 54% (WEM) or 33% (WAM). It should be recalled that any exceedance of a carbon budget must be

c See Box 4.1 of the Annual Review 2023[19] for a consideration of different projections scenarios.

carried forward to the following carbon budget period by reducing the following carbon budget by that exceedance. The scale of the potential exceedances in the second carbon budget period in particular is of concern at this time, accentuating the need for action to be taken immediately to reduce and eliminate any such exceedances.

Finally, it should be noted that the projections data pre-date the publication of the provisional inventory data for the period 1990–2023, which includes the major update to the inventory discussed in Box 1. This issue is also evident in *Figure 1*, where the inventories and projections data are not perfectly aligned where the provisional inventory values for 2022 and 2023 are smaller than the projected WEM and WAM for the same years. The Council must await the publication of the next round of projections from the EPA in 2025 before drawing any specific conclusions about the impacts of these necessary methodological changes.

In addition, Ireland is likely to face considerable difficulty in achieving its targets under the Effort Sharing Regulation (see *Section 5.6.1*).

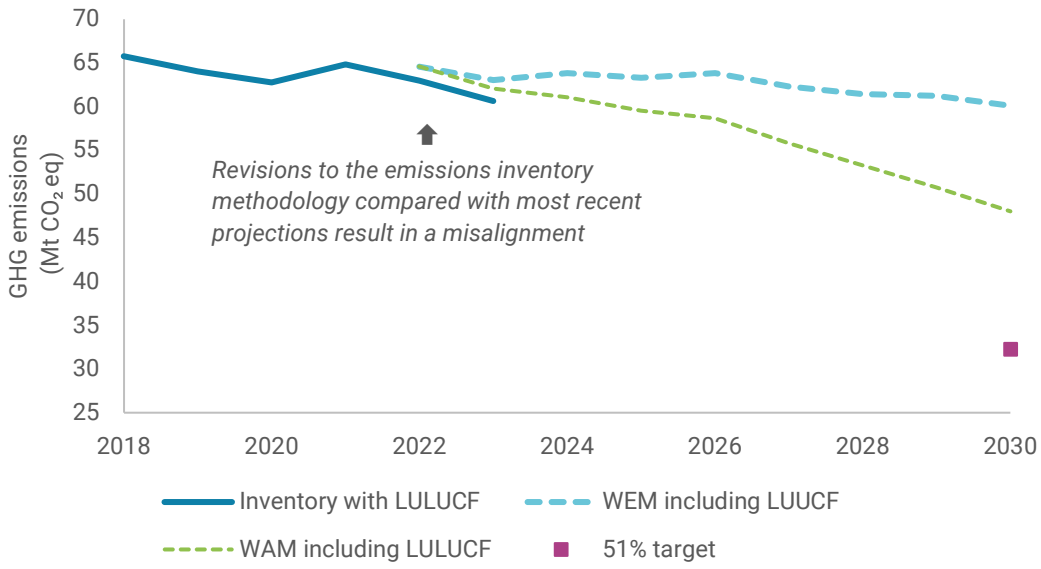

Figure 1: Inventory and projections of total annual greenhouse gas (GHG) emissions for the period 2018–2030. Also shown is the 51% emissions reduction target relative to 2018, mandated under legislation. The figure shows the current misalignment between inventory and projections that should be resolved with the next year's submissions.
(Sources: Ireland's Provisional Greenhouse Gas Emissions 1990–2023[3] and Ireland's Greenhouse Gas Emissions Projections 2023–2050.[13])

Table 3: Projected progress on carbon budgets. The carbon budget 1 columns include cumulative provisional estimates of emissions from 2021 to 2023, and the WEM and WAM projections for 2024 and 2025. These sum to the projected cumulative emissions for the first carbon budget period in column three, from which an estimate of exceedance for 2021–2025 is shown in column five. The carbon budget 2 column shows the agreed carbon budget allocations for the period 2026–2023 and the WEM and WAM projections of emissions for this period. Column six shows the estimated exceedance of carbon budget 2 on the basis of these projections.
(Sources: Ireland's Provisional Greenhouse Gas Emissions 1990–2023[3] and Ireland's Greenhouse Gas Emissions Projections 2023–2050.[13])

	Carbon budget 1		Carbon budget 2		Projected exceedance	
	2021–2023	2024–2025	2021–2025	2026–2030	2021–2025	2026–2030
						Mt CO_2 eq
Carbon budget			295	200		
Emissions inventory with LULUCF	188					
Emissions projections (WEM) including LULUCF		127	316	309	21 (7%)	109 (54%)
Emissions projections (WAM) including LULUCF		121	309	267	14 (5%)	67 (33%)

4. Progress on previous Climate Change Advisory Council recommendations

Previous Annual Reviews of the Council have recommended addressing a number of issues that are cross-sectoral in nature, and the rate of progress demonstrated against these recommendations is quite mixed.

In 2023, the Council was quite concerned about the lack of clarity around the issue of the LULUCF sector and the unallocated savings. In the Climate Action Plan 2024, the Government announced that it would set targets for the LULUCF sector that are consistent with Ireland's obligations under EU regulations, but it is not clear that the full ramifications of this new approach for the LULUCF sector have been fully explored by Government. This issue should be addressed in the Climate Action Plan 2025 to ensure consistency with overall carbon budgets.

The lack of regularly published annualised trajectories towards sectoral emissions ceilings means that Government departments continue to distance themselves from the responsibilities that they have taken on and may not be demonstrating the necessary levels of ambition to successfully deliver the results required.

The Council maintains its strong support for the carbon tax and welcomes the fact that the Government has thus far maintained the course in this regard. However, it is noteworthy that there has been little progress on the issue of reducing and removing fossil fuel subsidies in the interim.

Currently, the Council looks forward to the finalisation and rapid implementation of the new Planning Act and the revised National Planning Framework, both of which are fundamental to the fulfilment of national climate goals.

Quarterly reporting of progress on the Climate Action Plan resumed in early September 2024 with the publication of the progress report on legacy actions and actions that had been due for completion in the first two quarters of 2024.[14] These reports lay bare the fact that delivery across all actions has been disappointing, with over half of the remaining legacy actions from 2023 remaining incomplete, and a reported rate of 66% completion so far in respect of the actions due for completion during 2024. One of the main issues raised by way of explanation for these delays remains 'capacity and capability constraints', the analysis of which is overdue by almost 2 years.

As mentioned in previous Annual Reviews, delays to current actions mean that steeper emissions reductions pathways will be required in the future.

5. Analysis and discussion

5.1. Reducing Ireland's reliance on fossil fuels

The Council set out its position on Budget 2025 in a letter to the Ministers for Finance and Public Expenditure, NDP Delivery and Reform earlier this year.[15] Ireland needs to massively reduce its reliance on fossil fuels, which is not only essential for the climate but is also good for people's health, security, environment and pockets.

To ensure the clearest market signals it is imperative that the Government begins to address the issue of fossil fuel subsidies, which remain in place despite the climate imperative. In its global stocktake conclusions, Parties to the UNFCCC, including Ireland, called for, inter alia, 'phasing out inefficient fossil fuel subsidies that do not address energy poverty or Just Transitions, as soon as possible'.[1] The Central Statistics Office[16] estimates that fossil fuel subsidies totalled €4.7 billion in 2022, an increase of 68% relative to 2021 (see *Table 1*). This includes revenue foregone (including excise and value-added tax (VAT)) on jet kerosene of €786 million when compared with the benchmark fuel petrol.[11] Earmarking additional exchequer funds for targeted and necessary actions (such as welfare transfers or funding low-carbon or resilience-enhancing investments) offers the opportunity for progressively moving Ireland's taxation system towards one fully aligned with the National Climate Objective. The current means by which carbon tax revenues are redistributed offers a model by which incremental progress can be made in this area (see also *Section 5.2*).

It will be crucial for the Government to ensure that targeted financial supports are available to support households to transition away from fossil fuel-intensive activities. Furthermore, businesses, communities and households that are and will continue to be at risk from the negative impacts of climate change, such as flooding and drought, will also need to be supported. This will support an equitable transition to climate neutrality.

The changes required can also be enabled by financing climate actions that substitute the use of fossil fuels for lower carbon alternatives. The level of funding available for households, businesses and communities to finance these actions needs to be significantly increased, as the upfront capital costs of some of these technologies are hindering uptake. This market failure can be addressed by

greater Government subsidisation of well-understood alternatives such as electric vehicles and heat pumps and grant funding of retrofits particularly aimed at low-income households. The alternative to making such investments is that Ireland will ultimately need to pay other EU Member States to demonstrate its compliance with the various legal obligations under the Effort Sharing Regulation and the Renewables Directive (see also *Section 5.6*).

5.2. Just Transition

Council welcomes the establishment of the Just Transition Commission and the recommendations put forward by the Just Transition Commission Taskforce.[17] In particular, the Taskforce recommends that, when established, the Commission should prioritise accelerating dialogue across all of society, should provide evidence-informed policy advice around Just Transition and should monitor the integration of the Just Transition principles across climate policy development. The Council supports the Taskforce recommendation that the establishment of the Commission should move quickly from an administrative basis to a legislative basis.

The Commission's terms of reference, published by the Government, lay out its programme of work, as informed by the Taskforce recommendations.[18] The Council welcomes the programme of work and recognises the large extent to which it reflects the Council's Annual Review Just Transition recommendations in 2023.[19] It will be critical that the Commission is supported with the capacity needed to deliver its programme of work, given the extensive workload expected to be delivered by the Just Transition Commission and its Secretariat.

There has been some progress made on integrating Just Transition across policy in 2024. The Climate Action Plan integrated Just Transition actions across sectors.[20] However, Just Transition-specific actions lack a strategic and forward-looking implementation plan that goes beyond simply integrating the Just Transition principles. The Just Transition Commission will play a crucial role in monitoring and measuring the implementation of Just Transition actions through establishing and integrating a Just Transition Indicators Framework.[18]

A positive development in the revised National Adaptation Framework is the addition of a Just Resilience guiding principle. The principle will guide the development of adaptation measures in different sectors and by local authorities on resilience, which also supports fair and equitable outcomes.[21] However, there is still a lack of understanding of what Just Resilience means in practice. Clear guidance for practitioners for designing and implementing Just Resilience policy actions will be important.

The Council's sector reviews integrated Just Transition considerations. In summary, the Council recommended that the Government develop sector-specific dialogue between policymakers and stakeholders. This will be particularly important for the Agriculture sector, where farmers need to be involved in dialogue with decision-makers while the sector is transitioning, which will involve changes in farming practices. The recently concluded *Strategic Dialogue on the Future of EU Agriculture* provides a potentially useful template for such dialogue.[22]

Further to recommending increased sector-specific dialogue, the Council recommended an assessment of the skills required to support the achievement of the National Climate Objective so that SOLAS, the Higher Education Authority, other state education agencies and employers can make strategic training investments. This will ensure that people are equipped with the right skills to be able to participate in and benefit from the future carbon-neutral economy. Further to providing the current and future workforce with the right skills, the Government needs to consider the growing demand for labour in Ireland. Meeting the increased labour demand will be crucial for delivering the Climate Action Plan actions. It is estimated that 50,831 new entrants will have to be recruited over the period

2023–2030[23] if the Government's targets in housing and retrofitting are to be achieved. The Central Statistics Office has projected that the labour force will grow to between 3.0 and 3.3 million by 2037, driven by significant levels of additional inwards migration.[24] This will place increasing pressure on the demand for services. However, this increased supply of labour, if well managed by the relevant Government departments and agencies, could alleviate the growing pressure on the demand for labour nationally.

5.3. Citizen engagement

In its Annual Review 2023, the Climate Change Advisory Council called on the Government to increase and better coordinate efforts to support all members of society in making the transition through the prioritisation, adequate resourcing and delivery of meaningful dialogue and engagement with civil society to help individual and societal behavioural change. There was significant activity in gathering evidence on behavioural insights on climate action through wave 2 of the Climate Change in the Irish Mind study[25] in 2023, which will help inform policy choice and engagement activities moving forward. The Council also welcomes the two iterations of the National Climate Stakeholder Forum in 2023 that explored the challenges and opportunities presented by the transition to carbon neutrality and how engagement on climate action could be enhanced across the country.

Climate Conversations 2023 saw more than 4,000 people participate in the online survey from June to September. This was complemented by 12 workshops with targeted groups and also interviews with people who have taken on climate action projects. This grassroots activity, through the National Dialogue on Climate Action, is welcomed and complements other citizen engagement activities that help map the level of understanding of the climate challenge and how this is translating to individual, community, local and national action on climate change.

The Council welcomes the intention through the Climate Action Plan 2024[20] to build on the momentum from activities in 2023 through the development of the National Campaign of Communication and Engagement on Climate Action, to be delivered through the two channels of communications and engagement. With a strong evidence base developed for targeted engagement, the Council looks forward to seeing the move from the understanding of climate change to the impact of individual and collective climate actions in Ireland.

5.4. National Planning Framework

The successful implementation of the renewed National Planning Framework is critical for Ireland to achieve its National Climate Objective. The Council wrote to the Minister of Housing, Local Government and Heritage in September to express its views on the draft plan.[26]

The Council's letter emphasised several key areas where the National Planning Framework could significantly impact Ireland's climate targets:

- To ensure that Ireland reaches its full renewable energy potential, the Council stressed the importance of providing maximum clarity to local authorities on their contributions to national targets. It also urged the finalisation of the long overdue wind energy guidelines at the earliest opportunity.
- The Council urged a stronger focus on managing development to ensure genuine compact growth. This includes setting more ambitious targets, prioritising the use of brownfield and infill sites, urban regeneration and finalising the rural housing guidelines that align with overall targets.

- The letter highlighted the need to enable and support the roll-out of district heating in tandem with the roll-out of other low-carbon heat sources.
- An increased focus on Transport-oriented Development within the National Planning Framework is necessary to maximise the benefits of increased compact growth. The role of the National Transport Authority in planning for transport delivery should be enhanced across Ireland's cities.
- Highlighting the need for a renewed focus on climate resilience and biodiversity, the Council reiterated its call for a detailed coastal management plan to enable local authorities to begin planning for the impacts of sea level rise. In addition, there needs to be a greater emphasis on nature-based solutions and increased awareness of the biodiversity impacts of development more generally.

Finally, the Government must regularly measure and report on progress across these and other indicators. It is imperative that the new National Planning Framework is adopted before the end of 2024.

5.5. Land Use Review

As the broader economy transitions to a low-carbon model, fossil fuels and a reliance on high-carbon-intensity production and products will steadily be displaced by the use of biological, land-based processes and resources. The Government must complete the Land Use Review as a matter of urgency and set out a clear and detailed implementation plan of actions necessary to deliver the diverse range of bioeconomy and ecosystem services required to maintain a sustainable, resilient and biodiversity-rich economy.

This includes activities to enhance the sequestration and storage of carbon associated with land use and land management and to balance the additional diverse ecosystem services demanded in the transition to a low-carbon economy. This entails enabling a strategic approach to meeting the demand for renewable energy and other resources, and nature-based solutions for adaptation to the impact of climate change. The implementation plan should be consistent with the long-term National Climate Objective of achieving climate neutrality by 2050 and include nature protection and restoration of land for biodiversity.

5.6. European climate obligations and developments

5.6.1. Costs of compliance with the Effort Sharing Regulation

Ireland has demanding European targets alongside its national obligations. There is greater clarity around the financial implications of failure to comply with these targets than is the case for the National Climate Objective, albeit with considerable uncertainty around the magnitude of costs that may arise. In its February 2023 analysis the Irish Government Economic Evaluation Service (IGEES) estimated costs of compliance with the Effort Sharing Regulation of up to €8.1 billion using the WEM scenario[27] available at the time and future prices for the EU Emissions Trading System (ETS). For example, the report quoted a future contract price of €112 per tonne for delivery at end 2030. Future prices depend, critically, on how many EU Member States may exceed their targets and therefore have credits for sale. The outlook for Member States meeting their targets has generally worsened and thus credits are likely to be scarce.

Provisional national emissions for activities covered under the Effort Sharing Regulation indicate that emissions in 2022 and 2023 exceeded annual emissions limits even when the ETS flexibility of

approximately 1.91 Mt CO_2 eq per annum is taken into account (see first row of *Table 4*). This underperformance is projected to continue beyond 2023, resulting in the need for purchases of additional units from other EU Member States. Table 4 illustrates the extent of this potential distance to target for each of the emissions projection scenarios.

Table 4: Compliance with EU Effort Sharing Regulation targets 2021–2030.
(Sources: Ireland's Provisional Greenhouse Gas Emissions 1990–2023[3] and Ireland's Greenhouse Gas Emissions Projections 2023–2050.[13])

	Distance between provisional and projected emissions and target emissions, excluding use of any existing flexibilities (Mt CO_2 eq)									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Provisional inventories	1.4	2.0	2.3							
WEM				6.6	8.2	5.7	8.3	10.8	13.4	15.8
WAM				5.6	6.4	2.7	4.1	5.6	6.9	7.9

The cumulative distance to the Effort Sharing Regulation target in the WEM scenario over the full period 2021–2030 before the use of flexibilities is estimated at 74.6 Mt CO_2 eq. In respect of the WAM scenario this total is 44.8 Mt CO_2 eq. Allowing for the use of the ETS flexibility, these are reduced to 65.5. Mt CO_2 eq and 25.7 Mt CO_2 eq, respectively. The use of this flexibility results in foregone ETS auction revenues, which may be significant over the decade as a whole. The EPA projections suggest that the LULUCF flexibility may further reduce this exceedance by a maximum of 13.4 Mt CO_2 eq in the event that Ireland can utilise the full quota of potential allowances for the period 2021–2025. Estimates of the costs involved in purchasing the necessary allowances are in line with those published by IGEES last year. It should be noted that these calculations are sensitive to a variety of factors, but primarily with regard to the price forecasts used and the timing of purchases.[d]

Analysis by Transport & Environment carried out earlier this year, which assumes the EPA WAM scenario as its main input for Irish emissions, quantifies the potential liability for Ireland as up to €9.6 billion by 2030. Furthermore, the report gives rise to significant concern that there will be a major imbalance between supply of and demand for these units.[28] The report's authors estimate that the cumulative deficit across Member States would be in excess of 200 Mt CO_2 eq by 2030, creating an extremely competitive market for a very limited resource.

In addition, there will also be costs involved in purchasing statistical transfers or using one of the other mechanisms should Ireland fail to comply with its obligations under the Renewable Energy Directive.[e]

d Modellers must decide, for example, whether to apply a forecast price for 2032 or 2030 when estimating the costs of compliance for the year 2030.

e Tables 8 and 9 of the National Energy and Climate Plan set out the position in the WAM and WEM scenarios and range from a 0.3% to a 12% shortfall, respectively.

The Council welcomes the IGEES analysis as an important input to the debate surrounding the costs of climate action versus the liabilities associated with climate inaction. It calls for the analysis to be updated and published annually (well in advance of the fiscal budget) with additional clarity around the assumptions tested with regard to Effort Sharing Regulation flexibilities (including ETS revenues foregone), potential costs of compliance with the Renewable Energy Directive, price forecasts used for computing the costs and the timing of assumed purchase decisions.

5.6.2. Other developments

In 2024 the Government submitted its National Energy and Climate Plan (NECP).[29] This plan forms an important part of the climate planning hierarchy and should be consistent with the achievement of Ireland's carbon budgets and its long-term greenhouse gas emissions strategy. In the Council's letter[30] to Minister Ryan earlier this year in respect of the draft plan, which was then open for consultation, stress was placed on the need for Government departments to begin illustrating pathways towards compliance with national and EU obligations, as distinct from the pathways illustrated in the NECP, which are extracted directly from the latest available EPA projections. This distinction was also strongly evident in the European Commission's original response to the draft NECP.[f][31] The European Green Deal incorporated a very wide range of new targets across a range of relevant areas alongside the development of a range of enabling legislation, but it is not clear that the Government has demonstrated in its scenario planning how these targets will be achieved or the extent of emissions savings that the Green Deal as a package is likely to generate. The Council recommends that the Government should publish an implementation plan for the full suite of measures adopted as part of the European Green Deal by the end of 2025. In effect, the interlinkages between EU policy and national climate policy need to become much clearer as a part of building greater public acceptance of the necessary climate actions.

The Council is also aware that pressures will build on governments across the EU to agree a common position on the extent of emissions savings that will be required in the periods to 2035 and 2040, particularly in the run-up to the United Nations Climate Change Conference, COP30, in Brazil at the end of 2025. In 2023 the European Scientific Advisory Board on Climate Change published its advice to the European Commission on the extent of emissions reductions that would be required by 2040. The Commission responded to this advice in February 2024 by proposing a 90% reduction in net greenhouse gas emissions by 2040 relative to 1990.[32] The next Commission will make the legislative proposal to include this target in the European Climate Law and build towards ensuring that the post-2030 policy framework is supportive of achieving this ambition. In parallel, the Council will make carbon budget proposals for the periods 2031–2035 and 2036–2040 (provisional) later this year. The ultimate adoption of carbon budgets for these periods by the Oireachtas should thereafter inform the development of a consistent, well-elaborated and transparent national position on the EU's emissions reduction targets for 2040.

5.7. Unallocated savings

The issue of unallocated savings remains unresolved at this point. The Climate Action Plan 2024 (see Section 5.6 in the Climate Action Plan 2024[20]) includes a high-level analysis of the type of measures that might yield these extra savings and a range of commitments to put in place taskforces that will begin to analyse the gaps in more detail. It is noted, however, that the specific commitments in the plan only go as far as ensuring that terms of reference are in place for four such groups by the end of

f See Tables 16–18 of the National Energy and Climate Plan[29] for detail.

Q2 of 2024. It is disappointing that this task has not been completed on time, as reported in the *Climate Action Plan Progress Report*.[14]

There is also concern that the extent of these savings may need to be reassessed in light of the treatment of the LULUCF sector announced in the Climate Action Plan, in which targets are being set based on EU targets. While it is welcome that there is now a process in place to resolve the issues in respect of unallocated savings in advance of the end of 2025, the Council stresses the importance of the taskforces being put in place and their work being concluded in full and on time and that future analysis of this issue in Climate Action Plan 2025 includes an assessment of the impact of the approach to LULUCF on this issue.

5.8. Nature Restoration Law

The EU Regulation on nature restoration[33] came into effect in August 2024. The regulation stipulates legally binding targets and establishes a framework within which Member States are to put in place effective and area-based restoration measures to cover at least 20% of land areas and sea areas by 2030 and all ecosystems in need of restoration by 2050.[g] It is expected to contribute to the long-term and sustained recovery of biodiverse and resilient ecosystems across Member States' land and sea areas and to achieving overarching EU objectives concerning climate change mitigation and adaptation.

In fulfilling its commitment to the EU regulation, Ireland is required to develop and submit its National Restoration Plan for nature to the European Commission by 1 September 2026. The plan will contain specific national targets and measures to restore degraded habitats in marine and terrestrial protected areas and to enhance biodiversity within agricultural, forest and urban ecosystems in the period up to 2050. This aligns with the timeframe for achieving the National Climate Objective, and it is essential that the National Restoration Plan ensures the alignment of climate and biodiversity targets in pursuit of the National Climate Objective.

The National Restoration Plan will apply to areas both within and outside protected areas and will lead to the adoption of more nature-friendly management approaches and land uses that ensure diverse ecosystems. The commitment of a diverse range of stakeholders, in particular private landowners, is required to ensure the successful design and implementation of the National Restoration Plan. It is therefore important that it is properly funded, including adequate financial incentives, and developed through a highly participatory and inclusive approach.

5.9. National climate observation system

The Government needs to ensure that the funding and necessary support are in place to sustain and improve the national climate observation system and to support the development and operation of a national climate event attribution capability.

The national climate observation system includes a number of components such as radar systems, climate monitoring stations, the Irish Soil Moisture Observation Network[34] and a reference hydrometric network to monitor and detect changes in river flows (including floods, droughts and seasonal flows) across Ireland.[35] In addition, the Irish Global Climate Observing System group provides an important contribution in reviewing and monitoring the status of essential climate variables for Ireland to ensure alignment with international standards. Ireland should continue to support the full implementation of

g See also Sections 4.1 and 4.3 of the Biodiversity Sectoral Review for more detail on targets relating to conservation and restoration.

the Global Climate Observing System through actions at home improving and sustaining its observing capabilities and abroad through contributions to the Systematic Observations Financing Facility, which aids developing nations' observing networks. Supporting Ireland's national climate observation system is vital to generate more accurate forecast information for weather forecasters, the public and researchers to help improve Ireland's ability to respond to extreme weather events, as well as to track climate change over a longer time horizon. Supporting attribution study research is also important to increase understanding of the fingerprint of climate change in extreme weather events and to inform actions to help manage present and future climate impacts. In collaboration with the World Weather Attribution group, the Irish Climate Analysis and Research UnitS (ICARUS) and Met Éireann have demonstrated the value and viability of such timely attribution analysis with respect to the Midleton floods of 2023 and the atypical weather during autumn/winter of 2023/2024.[36,37] The analysis confirmed the high probability that human-induced climate change is already impacting extreme events in Ireland.

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