CLIMATE CHANGE ADVISORY COUNCIL

Annual Review 2025

Cross-sectoral Review

Annual Review 2025: Cross-sectoral Review

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Summary for All

Key observations

1. In this Review, the Climate Change Advisory Council warns that Ireland remains substantially off track in meeting its EU and national emissions reduction targets by 2030, with progress in the Agriculture and Transport sectors, which collectively account for approximately 55% of Irish emissions, proving particularly slow and challenging. The Council urges the Government to move from ambitious statements to implementing impactful and demonstrable actions that build momentum and public buy-in.
2. Failure to meet targets will potentially result in substantial compliance costs, estimated to be in the range of €8–26 billion, and a colossal missed opportunity to invest in Irish households, communities and businesses — creating jobs, improving health and wellbeing, and protecting the most vulnerable in society.
3. In 2024, fossil fuel subsidies totalled €4.7 billion, while households paid €3.4 billion in environmental taxes. In 2023, households paid €3 billion in environmental taxes but received only €408 million (or 14%) back in subsidies. The net effect of these measures is that they are encouraging the increase rather than reduction of greenhouse gases through the tax system.
4. Failure to transpose EU directives into national law fully and on time, along with critical shortages in the skilled workforce and insufficient training opportunities, further threaten progress and require urgent action.

Key recommendations

Decarbonising Ireland's energy system

1. Fossil fuel subsidies must be eliminated without delay to support Ireland's transition to a low-carbon energy system. The Government should conduct a full review of national energy taxes and fossil fuel subsidies, develop fair and equitable reform pathways and implement a plan consistent with the carbon budgets in advance of Budget 2027.
2. The delay in transposing EU directives into law, particularly in relation to energy, is extremely concerning given the urgent need to transition to a low-carbon energy system. The Council urges the Government to ensure full transposition of all climate- and energy-related directives into law in advance of Ireland's Presidency of the Council of the European Union in July 2026.

Compact growth

1. To properly assess the next National Development Plan, there must be a stronger focus on clear and more ambitious targets for compact growth, especially for new builds. These targets must support the development of sustainable communities within built-up areas of cities, towns and villages and protect space for nature as required by the EU Nature Restoration Law.

Climate governance

1. By the end of the first carbon budget period in 2025, the Government must clarify how it intends to deal with sectoral emissions ceiling exceedances, unallocated emissions savings, revisions to historical emissions inventory estimates, and the sectoral emissions ceiling for the Land Use, Land Use Change and Forestry sector. This is essential to provide certainty across sectors in advance of the second carbon budget period.

Abbreviations

ABICAP	Administrative Burdens as Barriers to Implementation of Ireland's Climate Action Plan
CAP	Climate Action Plan
CBAM	Carbon Border Adjustment Mechanism
CRU	Commission for Regulation of Utilities
CSO	Central Statistics Office
DZ	decarbonising zone
EPA	Environmental Protection Agency
ESRI	Economic and Social Research Institute
ETS	Emissions Trading System
EV	electric vehicle
FET	further education and training
IROPI	imperative reasons of overriding public interest
LULUCF	Land Use, Land Use Change and Forestry
OECD	Organisation for Economic Co-operation and Development
PaMs	policies and measures
PSO	Public Service Obligation
PV	photovoltaic
RCP	Representative Concentration Pathway
SMEs	small and medium-sized enterprises
VAT	value added tax
WAM	with additional measures
WEM	with existing measures

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Key observations

1. The latest Environmental Protection Agency provisional inventories and projections indicate that Ireland remains well off course in meeting its EU and national obligations for emission reductions by 2030. While emissions are falling in aggregate, these decreases are not happening anywhere near fast enough. The Government needs to begin matching its positive language on climate policy with impactful actions and decisions that make it clear that the transition to a climate-neutral economy is a high priority and provide the necessary signals and conditions to enable citizens to participate in the transition.
2. Analysis of Ireland's distance to EU targets suggests that the costs of complying with obligations will be in the range of €8–26 billion, constituting a colossal missed opportunity to make investments in Irish households, communities and businesses, creating jobs in Ireland and improving the health and wellbeing of citizens while protecting the most vulnerable from the impacts of climate change. The cost estimates are particularly sensitive to emissions from the two largest emitting sectors covered by the Effort Sharing Regulation, Agriculture and Transport, which collectively account for 55% of overall emissions and where progress to date is particularly slow. The Government will need to step up support for transition across the board but particularly in these two sectors.
3. The Central Statistics Office estimates that fossil fuel subsidies in 2024 totalled €4.7 billion, including just under €1 billion in temporary measures in response to the rise in energy prices. In the same year, environmental taxes totalled €5.5 billion, with households estimated to have paid €3.4 billion of these taxes, an increase on the €3 billion paid in 2023.[1] Households were the direct beneficiaries of just €408 million in environmental subsidies in 2023 (most recent data) out of a total of €1.8 billion. The net effect of these measures is that they are encouraging the increase rather than reduction of greenhouse gases through the tax system.
4. In respect of the transposition of EU directives, Ireland is carrying a transposition deficit[a] – the extent to which transposition has not taken place within legislated time frames – of 12.5% in the energy area, but less than 1.5% overall. In respect of energy files, Ireland's level of compliance is worse than the average across the EU. Given the importance of EU legislation in this area, it is vital that Ireland aims for the highest possible compliance. The geopolitical and reputational risks of carrying this deficit into the upcoming EU Presidency should not be underestimated.
5. There remain critical shortages in skilled workers to undertake many elements of the low-carbon transition. This is exacerbated by a deficit in appropriate training opportunities in some sectors and the current low levels of unemployment in the Irish economy, which is still growing strongly despite external threats.

a The transposition deficit is the percentage of transposition deadlines for which a Member State has not yet completely notified its transposition measures to the European Commission, in relation to the total number of transposition deadlines for which the Member State should have notified complete transposition.

6. The EU Carbon Border Adjustment Mechanism (CBAM) will come into effect in January 2026. The CBAM seeks to create a level playing field for internal and external manufacturers selling carbon-intensive products on European markets. With the CBAM, a carbon price will be levied on imported and domestic products sold in the EU. The mechanism is designed to avoid carbon leakage and create an incentive for those seeking access to EU markets to lower the carbon intensity of their production systems.

Key recommendations

Decarbonising Ireland's energy system

1. It is imperative that all fossil fuel subsidies are eliminated expeditiously as part of the planned decarbonisation of Ireland's energy system. To support a fair, effective energy transition, the Government should conduct a comprehensive review of national energy taxation and fossil fuel subsidy structures and implement an action plan consistent with the carbon budgets in advance of Budget 2027.
2. The Council is deeply disappointed that transposition of many EU directives into national law has been delayed and other important deadlines have been missed in respect of vital elements of the Fit for 55 package. The Council calls on the Government to ensure that this is fully addressed well in advance of Ireland's Presidency of the Council of the European Union. The rate of transposition in the area of energy is of particular concern given the pressing need to decarbonise Ireland's energy system.
3. The Council recommends the introduction of bundled consumer incentives for the combined adoption of solar photovoltaics alongside heat pumps and electric vehicles, leveraging the synergies between these technologies to accelerate decarbonisation while supporting energy affordability and grid stability. Bundling of subsidies in this way should be sensitive to the need for a Just Transition and give the most grant support to those most in need, and it is vital that discounted lines of finance such as long-term, low-interest rate loans remain open and available to households to make these transformative changes. Furthermore, the Government should be actively pursuing ways to make it easier for farming households to avail of grants for the decarbonisation of their farms and homes.
4. Administrative frictions make actions to reduce emissions or increase resilience more difficult to navigate and may be holding back greater uptake and action across all sectors. The Council recommends a review of current Government schemes that provide supports for decarbonisation, utilising behavioural research such as the methodology used to identify administrative frictions within current schemes supporting forestry, solar photovoltaics and electric vehicle uptake.

Compact growth

1. To help assess the outcome of the National Development Plan, it is vital that the Government has a renewed focus on, and significantly more ambitious and specific targets for, compact growth, particularly in respect of new builds. These targets should have a particular focus on building sustainable communities within the built-up areas of Ireland's cities, towns and villages to ensure that these communities are good places to live. These new developments need to respect the requirements on no overall loss of space for nature, as set out in the EU Nature Restoration Law.
2. To ensure that there is a better understanding of the impact of poorly located development on the demand for transport services, the Council reiterates its call for the Central Statistics Office to refresh its Measuring Distance to Everyday Services in Ireland publication, using Census 2022 data, and urges it to work with Transport Infrastructure Ireland and/or other parties so that it can also provide more granular geographical detail and extend its output, where possible, to data on time of travel.

Climate governance

1. Given that it is increasingly likely that a number of sectors will exceed their sectoral emissions ceilings for Carbon Budget 1 (2021–2025), the Government should clarify before the end of this year how such sectoral emissions ceiling exceedances will be dealt with at a sectoral level to minimise future uncertainty. In addition, it is critical that the issues of unallocated savings and the sectoral emissions ceilings for Land Use, Land Use Change and Forestry are fully clarified by the end of 2025 by the Government so that sectors have certainty as to what is expected and can plan accordingly, and so that the issue around how historical revisions will be dealt with is clarified.
2. Further enhancing climate governance and transparency requires that the Government respond directly to recommendations from the Council through its annual climate action plans, and also that quarterly reporting be made more transparent by the publication of action-level detail, and more timely by ensuring that it is published every quarter.
3. It is vital that the flagship decarbonising zones in each local authority succeed in creating momentum and implementing locally appropriate solutions while mobilising innovation and concrete actions among households and businesses in these areas. Councils must be given sufficient support to ensure the success of these projects without delay, and long-term support needs to be assured to give local communities the confidence to undertake meaningful climate actions.
4. Starting in Budget 2027, the Government should provide annual, defined funding to make climate action roles in local authorities and the climate action regional offices permanent. This will ensure retention of the key expertise necessary to build momentum and accelerate the implementation of both climate mitigation measures (including the flagship decarbonising zones) and climate resilience measures.

Enabling actions

1. Investing in protecting Ireland from the impacts of climate change now will save the Government and consumers money in the long run. It is critical that future Government plans for capital expenditure integrate the highest possible level of ambition for adaptation, informed by the National Climate Change Risk Assessment and the sectoral adaptation plans, and that actions are taken to leverage private finance to support better resilience outcomes.
2. The Government must invest in small and medium-sized enterprises, apprentices and employees, particularly the most vulnerable, to ensure they have the opportunity and incentive to reskill and upskill in order to take up the opportunities arising from transition. Incentives could include support for competitive payments for apprenticeships and payments for completion of relevant further education and training courses. The Council also recommends that SOLAS play a proactive role in promoting career opportunities arising from the green transition, including integration of green skills into all relevant further education and training programmes.

1. Introduction

The World Meteorological Organization has confirmed that 2024 was the warmest year on record and that the past 10 years make up the 10 warmest years on record.[2] The United Nations Environment Programme's Emissions Gap Report 2024[3] cautioned that a temperature increase in the order of 2.6–3.1°C is likely by 2100 unless significant additional action is taken globally. Unfortunately, the impacts of climate change are also becoming ever more evident. Recent storms Darragh and Éowyn exposed the vulnerability of Ireland to climate risks at home and abroad. These risks have now been set out in greater detail for Ireland in its first National Climate Change Risk Assessment, recently published by the Environmental Protection Agency (EPA).[4]

Action at EU level has continued, although concern is growing about a gradual reduction in the level of prioritisation and attention that climate change policy is receiving. While the details of the recently announced 2040 package are yet to be fully elaborated, recent economic turbulence has led to some rowing back in the extent of ambition for some elements of the Fit for 55 2030 package. Overall emissions must fall by about 7% per annum for Ireland to demonstrate compliance with its aggregate (adopted and proposed) national targets over the full period from 2021 to 2040, including the provisional carbon budget for the period 2036–2040. Should momentum be generated early it may still be possible to insulate Irish consumers from the upper end of the range of possible outcomes (€8–26 billion) identified in a recent study carried out by the Council with the Irish Fiscal Advisory Council.[5] Failing to do so, as the report suggests, would be a colossal missed opportunity.

2. Inventories and projections

2.1. Emissions inventory

The EPA's provisional inventories for the period 1990–2024 demonstrate that there was some progress made in 2024, including a welcome drop in emissions of approximately 2.0%[a] compared with 2023, with reductions in emissions evident in all sectors except the Built Environment sector (Table 1).

2.2. Emissions projections

The EPA's most recent projections, for the period 2024–2055, continue to illustrate the difficulty Ireland faces in delivering on the first two carbon budgets (Figure 1).[8]

Projections are carried out using two differing scenarios known as the with existing measures (WEM) and with additional measures (WAM) scenarios.[b] In respect of the carbon budgets, the latest projections estimate that the first carbon budget will be exceeded by 9.5 Mt CO_2 eq (WEM) or 6.8 Mt CO_2 eq (WAM) (Table 2). Projections for the second carbon budget present a starker picture, in which the exceedances modelled are 101.1 Mt CO_2 eq (WEM) or 69.7 Mt CO_2 eq (WAM). It should be recalled that the provisions of the Climate Act state that any exceedance of a carbon budget must be 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 significant concern at this time, accentuating the need for action to be taken immediately to reduce emissions and correct course.

a The provisional inventory excludes the updated estimate for the Land Use, Land Use Change and Forestry sector.

b See Box 4.1 of the Annual Review 2023 for a consideration of different projections scenarios.

Table 1: Sectoral emissions, 2018–2024.

LULUCF, Land Use, Land Use Change and Forestry; N/A, not applicable; SEC, sectoral emissions ceiling.
*LULUCF data for the 2024 provisional inventory are 2023 final inventory estimates. These will be updated for the 1990–2024 final inventory published in 2026. Based on an initial assessment, total emissions from the sector are likely to be similar to recent years.

(Sources: Ireland's Provisional Greenhouse Gas Emissions 1990–2024[6] and Department of Climate, Energy and the Environment, 'Sectoral Emissions Ceilings'.[7])

Sector	2018 (Mt CO_2 eq)	2021 (Mt CO_2 eq)	2022 (Mt CO_2 eq)	2023 (Mt CO_2 eq)	2024 (Mt CO_2 eq)	Total SEC/ budget (Mt CO_2 eq)	SEC/ budget used (%)	2024 emissions relative to 2018 (%)	2024 emissions relative to 2023 (%)
Electricity	10.2	9.9	9.7	7.6	6.9	40	85	−32	−8
Transport	12.3	11.1	11.8	11.8	11.7	54	86	−5	−1
Buildings (residential)	7.0	6.9	5.8	5.4	5.6	29	81	−20	+5
Buildings (commercial and public)	1.5	1.4	1.4	1.4	1.5	7	82	−4	+8
Industry	7.0	7.1	6.7	6.3	6.0	30	87	−14	−5
Agriculture	21.4	21.9	21.8	20.8	20.4	106	80	−5	−2
Other	2.0	1.8	1.8	1.7	1.6	9	76	−20	−4
LULUCF	4.0	4.3	3.7	3.9	3.9*	N/A	N/A	−3	0
Total excluding LULUCF	**61.5**	**60.1**	**58.9**	**54.8**	**53.8**	**N/A**	**N/A**	**−13**	**−2**
Total including LULUCF	**65.5**	**64.4**	**62.5**	**58.7**	**57.6**	**295**	**83**	**−12**	**−2**

Unless such action is taken, it is now plausible that the remaining carbon budget (after adjustments for projected exceedance carryovers) for the periods beyond 2030 will be close to zero in the case of the third carbon budget and potentially negative for the fourth carbon budget period and budgets thereafter.

In addition, Ireland is likely to face considerable difficulty in achieving its targets under the EU Fit for 55 package of measures, leading to significant compliance costs. Earlier this year the Council, in collaboration with the Irish Fiscal Advisory Council, carried out a detailed study of the potential costs of compliance under four of the main legal instruments in the EU Fit for 55 package[5] (the EU Effort Sharing Regulation, the Land Use, Land Use Change and Forestry Regulation, the Renewable Energy Directive and the Energy Efficiency Directive).

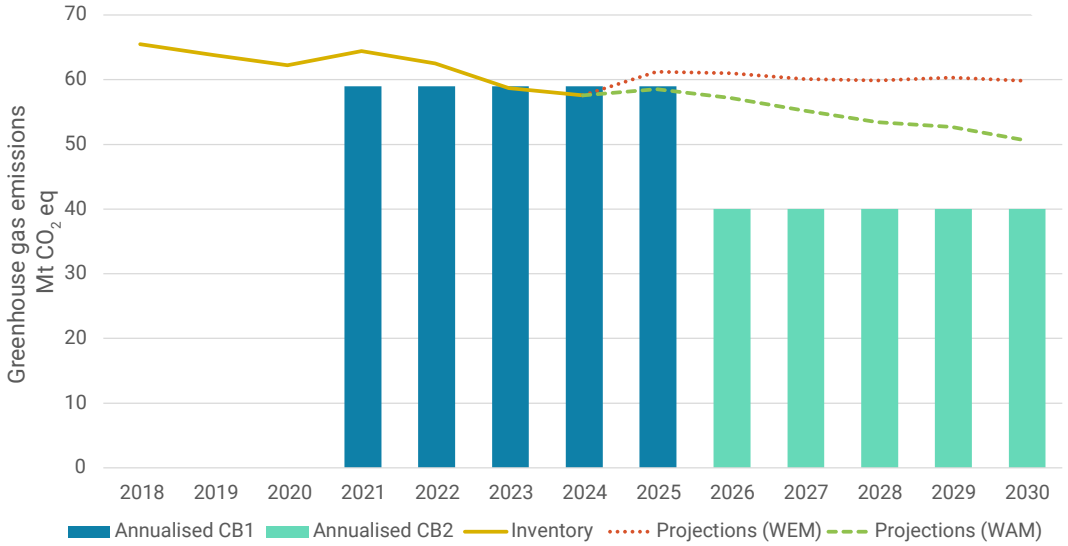

Figure 1: Inventory and projected greenhouse gas emissions for all sectors for the period 2018–2030 with annualised carbon budgets.

CB1, Carbon Budget 1 (2021–2025); CB2, Carbon Budget 2 (2026–2030); WAM, with additional measures; WEM, with existing measures.

(Sources: Ireland's Greenhouse Gas Emissions Projections 2024–2055[8] and Ireland's Provisional Greenhouse Gas Emissions 1990–2024.[6])

Across three of these four legal instruments[c] there are compliance mechanisms built in that mean that Ireland will need to purchase either emission allowances or statistical transfers from other Member States if it cannot independently demonstrate compliance. The overall costs involved are dependent on the extent of any distance to target and the price that any compliant Member State would be willing to sell their surplus units or transfers for, as appropriate.

It is estimated that these costs will be in the range of €8–26 billion based on the EPA WEM scenario or €3–12 billion if using the more optimistic EPA WAM scenario (Figure 2). The extent of the range of estimates illustrates the high degree of uncertainty involved. This uncertainty relates to the path for Ireland's emissions (and renewable energy capacity), the costs of demonstrating compliance with the legislation and broader uncertainty around costs if the EU as a whole misses its targets. At present the overall prognosis for the achievement of these targets is not positive, particularly for some of the larger Member States like Germany and Italy,[9] and, therefore, there is likely to be a sellers' market for these emissions allowances, where in prior cases it has been a buyers' market, significantly reducing the costs of non-compliance.

c The Energy Efficiency Directive does not include the potential for demonstrating compliance by way of paying for actions that take place in other Member States.

Table 2: Projected progress on carbon budgets.
The Carbon Budget 1 columns include cumulative provisional estimates of emissions from 2021 to 2024 and the WEM and WAM projections for 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 2026–2030 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.

LULUCF, Land Use, Land Use Change and Forestry.

(Sources: Ireland's Greenhouse Gas Emissions Projections 2024–2055[8] and Ireland's Provisional Greenhouse Gas Emissions 1990–2024.[6])

	Carbon Budget 1			Carbon Budget 2	Projected exceedance	
	2021–2024	2025	2021–2025	2026–2030	2021–2025	2026–2030
Carbon budget (Mt CO_2 eq)	295			200	–	
Emissions inventory with LULUCF (Mt CO_2 eq)	243.3	–	–	–	–	–
Emissions projections (WEM) including LULUCF (Mt CO_2 eq)	–	61.2	304.5	301.1	9.5	101.1
Emissions projections (WAM) including LULUCF (Mt CO_2 eq)	–	58.5	301.8	269.7	6.8	69.7

Given the scale of the costs involved, the Council recommends that this issue is kept under close review by the Government (including by way of transparent and regular updates to the cost estimates) and that plans are put in place to address the costs, which are likely to begin arising in earnest in 2027[d] after the finalisation of the 2025 inventories.

The impact of different policies and measures (PaMs) on overall emissions levels varies greatly depending on a number of factors. Therefore, there is significant variation in the level of importance of delivering different policy targets. For example, in Ireland the delivery of the renewable targets for electricity will result in a very significant decrease in electricity emissions, leading in turn to a reduction in the potential costs of compliance with the Renewable Energy Directive. The full delivery of other important policies would also reduce costs under the Effort Sharing Regulation. In order to ensure the delivery of carbon budgets, it is critical that all the most important policies are delivered by the Government on time and in full.

d The reduced income from Emissions Trading System auctions associated with Emissions Trading System flexibility began in 2021.

Figure 2: Ireland's climate action and the potential costs of missing targets.
(Source: Irish Fiscal Advisory Council and Climate Change Advisory Council, A Colossal Missed Opportunity.[5])

Each year the EPA submits data to the European Environment Agency on the impact of PaMs on emissions levels.[10] This is carried out in tandem with the emissions projections process and helps to uncover the extent to which each of the scenarios is dependent on the full delivery of various PaMs. Table 3 lists the 10 most important PaMs included in the latest EPA projections for greenhouse gas emissions reductions in the year 2030. Given the scale of the savings evident, it is clear that there needs to be a continuing and relentless focus on the delivery of these measures over the coming years. While it is critical that the Government fully outlines its preferred course of action in respect of the unallocated savings this year (see *Section 4.1*), it will be vital to ensure that all measures in both EPA scenarios continue to be fully funded and properly resourced.

3. Indicators

3.1. Economic, energy and emissions indicators

The Economic and Social Research Institute (ESRI) reported growth in modified domestic demand of 1.7% in 2024 and projects growth of 3.8% and 3.2% in 2025 and 2026, respectively.[11] These forecasts reflect the US and EU agreement on 15% tariffs, which is likely to be impactful for many firms and sectors. However, depending on developments in international trade, risks arising from US–EU tensions on digital regulation and the duration of the newly imposed tariff regime, this outlook may prove optimistic. Table 4 lists a number of these and other relevant indicators that the Council uses to understand the movements in Ireland's emissions.

Unemployment remains at a very low level in Ireland, but there is a need for significantly enhanced resources to build and maintain Ireland's productive capital base. The Irish Fiscal Advisory Council has pointed out that Ireland is carrying a significant infrastructure deficit across a range of sectors (housing, health, Transport and Electricity) relative to other high-income European countries.[12]

Table 3: The most important PaMs for 2030.
The table lists the 10 PaMs that are projected to achieve the largest potential greenhouse gas emissions reductions in 2030. *Includes support provided by the obligated party only. **Planned measure under WAM only with no related implemented PaMs under WEM.

LULUCF, Land Use, Land Use Change and Forestry.

(Source: Ireland's Greenhouse Gas Emissions Projections 2024–2055.[8])

PaMs	Sector	Mt CO_2 eq
RES-E (electricity generated from renewable energy)	Energy industries	11.76
RES-H (consumption of renewable heat)	Cross-sectoral (Agriculture; manufacturing combustion; residential; commercial and public services)	4.87
RES-T (consumption of biofuels)	Transport	1.61
Energy Efficiency Obligation Scheme (EEOS)*	Cross-sectoral (residential; commercial and public services; Transport)	1.32
Electric vehicle deployment	Transport	1.25
Methane-inhibiting feed additives in bovine diets**	Agriculture	1.19
Extended forestry rotation**	LULUCF	0.98
Carbon tax	Cross-sectoral (Agriculture; Transport; manufacturing combustion; residential; commercial and public services)	0.96
Private car demand reduction*	Transport	0.94
Large Industry Energy Network	Manufacturing combustion	0.88

While the recently announced National Development Plan Review appears to offer a pathway to the elimination of some or all of these deficits, Ireland's recent record on delivery of major capital plans will need to improve.

Budget 2026[13] included further welcome increases to funding for a range of schemes that encourage the uptake of solar photovoltaic (PV) and other residential upgrades, while also confirming the latest increases to carbon taxes in line with the existing legislation. Irish households are certainly paying their way in terms of environmental taxes. The Central Statistics Office (CSO) estimates that, while only 23% of emissions are attributable to the household sector, 60% of environmental taxes are paid by households and only 22% of environmental subsidies are received by the sector.[14–17] There is a strong case to be made for increasing the availability of environmental subsidies to families and single-person households to help them reduce their impact on the environment and accelerate the move away from fossil fuel consumption in Ireland (see also *Section 5.1*).

Table 4: Selected economy-wide indicators of progress on climate action and macroeconomic drivers of emissions.

GHG, greenhouse gas; GNI, gross national income; LULUCF, Land Use, Land Use Change and Forestry.

(Sources: Ireland's Provisional Greenhouse Gas Emissions 1990–2024,[6] CSO population estimates,[18] Sustainable Energy Authority of Ireland National Energy Balance 2024,[19] CSO Fossil Fuel Subsidies,[20] CSO Modified Gross National Income at Constant Market Prices,[21] CSO Table ETA08[22] and Sustainable Energy Authority of Ireland Energy Statistics in Ireland.[23])

Indicator	Unit	2018	2019	2020	2021	2022	2023	2024
National emissions excluding LULUCF	Mt CO_2 eq	61.5	59.7	57.5	60.1	58.9	55.8	53.8
National emissions including LULUCF	Mt CO_2 eq	65.5	63.8	62.2	64.4	62.5	58.7	57.6
Change in national emissions relative to 2018 excluding LULUCF	%	–	−3.0	−6.5	−2.3	−4.3	−10.8	−12.6
Change in national emissions relative to 2018 including LULUCF	%	–	−2.6	−5.0	−1.6	−4.5	−10.3	−12.0
Annual change in national emissions excluding LULUCF	%	–	−3.0	−3.6	4.5	−2.0	−6.8	−2.0
Annual change in national emissions including LULUCF	%	–	−2.6	−2.0	3.3	−2.8	−3.8	−1.9
National CO_2 emissions including LULUCF	Mt CO_2	38.9	37.3	36.1	37.9	36.3	35.0	35.7
Population	Thousands	4,885	4,959	5,030	5,075	5,184	5,282	5,380
Total primary energy requirement	TWh	171	170	155	160	167	164	167
Modified GNI at constant prices	€ million	235,503	240,674	234,772	267,083	275,832	291,428	305,374
GHG emissions intensity (GHG/GNI)	kt CO_2 eq per € million	0.28	0.27	0.27	0.245	0.234	0.202	0.19
GHG emissions per capita	t CO_2 eq per capita	13.46	12.91	12.48	12.77	12.15	11.48	10.71
CO_2 emissions intensity (CO_2/GNI)	kt CO_2 per € million	0.17	0.16	0.156	0.145	0.13	0.11	0.12
CO_2 emissions per capita	t CO_2 per capita	7.99	7.56	7.15	7.47	7.03	6.34	6.64
Fossil fuel subsidies	€ million	3,296	3,116	2,436	2,857	4,744	4,978	4,670
Environmental taxes paid by the household sector	€ million	3,341	3,415	2,909	3,147	2,828	3,042	3,438
Average electricity price to households	€/kWh	0.23	0.24	0.24	0.26	0.27	0.32	0.35
Average gas price to households	€/kWh	0.07	0.07	0.07	0.07	0.12	0.16	0.13

4. Progress on previous Climate Change Advisory Council recommendations

4.1. Carbon budgets, unallocated savings, the treatment of improvements to inventories and the Land Use, Land Use Change and Forestry sector

Uncertainty surrounding the allocation of emissions reductions and the treatment of the Land Use, Land Use Change and Forestry (LULUCF) sector continues to challenge Ireland's ability to deliver on its climate commitments. The Council has consistently called for clarity on these issues, particularly as the first carbon budget period comes to an end. The Climate Action Plan 2025 (CAP25) confirms that work is under way to allocate the currently unallocated greenhouse gas emissions savings across key sectors ahead of the second carbon budget period (2026–2030), with recommendations expected to be published in 2025.[24] To support this process, several working groups have been established, including a dedicated taskforce examining mitigation opportunities for the Agriculture sector identified in the updated Teagasc Marginal Abatement Cost Curve. It is essential that these groups also consider the issue of the treatment of the LULUCF sector in their work,[e] that this work is concluded on time and in full, and that the Government responds swiftly and decisively to the recommendations arising once it is published.

A further aspect of uncertainty arises from the fact that it is currently unclear what will happen to sectoral emissions ceilings if carbon budgets are exceeded. While the Climate Act 2021 is quite clear on the implications for carbon budgets, whereby any exceedance must be carried over to and deducted from the subsequent carbon budget,[25] it is not clear what the implications are for individual sectors. To minimise the uncertainty for sectors, the Government should set out a process for the allocation of additional unallocated savings that will be created should the projected exceedance come to pass. This issue should also be addressed before the end of the first carbon budget period.

The Council has also previously proposed that Ireland's climate targets under the Climate Act 2021 be routinely reviewed to ensure they remain fit for purpose and take account of emerging scientific evidence and technical developments, particularly changes in emissions inventory methodologies. As Ireland moves into the second carbon budget period in 2026, the absence of a formal mechanism to review the carbon budgets in light of evolving scientific understanding remains a critical gap in the climate governance framework. The Council remains of the view that these reviews should be scheduled to coincide with the conclusion of the inventory process for each carbon budget period (i.e. every 5 years from April 2027) and that they should adopt a retrospective and forward-looking focus.

4.2. Accelerating mitigation measures

The Council has previously called on the Government to redouble its efforts to accelerate the deployment and prioritisation of key mitigation measures across departments and agencies to make up lost ground. To date, there is little evidence of such acceleration. While 2023 saw encouraging

e The new treatment of the LULUCF sector announced in CAP24 effectively increases the extent of the unallocated savings beyond the 26 Mt CO_2 eq gap frequently referenced. If Ireland meets its EU targets precisely then the savings gap would increase by an estimated 5 Mt CO_2 eq for the second carbon budget period. As the EU regulation does not prescribe total emissions levels for the sector over the period 2021–2025, it is not possible to perform an equivalent calculation for the first carbon budget period.

emissions reductions across several sectors, this momentum has not been sustained. In 2024, the overall pace of emissions reductions slowed and emissions in the Built Environment sector increased.[6] The latest projections indicate that Ireland is expected to achieve only a 9% reduction in emissions by 2030 under the WEM scenario and a 23% reduction under the WAM scenario – falling well short of the legally binding 51% reduction required under the Climate Act 2021 and Ireland's EU Effort Sharing Regulation commitments.[f] This highlights the urgent need for a step change in policy implementation, delivery and coordination across all parts of the Government.

The Council has also repeatedly called for reform of Ireland's planning, licensing and regulatory systems to support the scale and pace of infrastructure investment needed for rapid emissions reductions. The approval of the revised National Planning Framework in April 2025 was an important milestone.[26] This includes important commitments to transport-oriented development, regional renewable electricity capacity allocations and integration of nature-based solutions into sustainable water management systems. However, delays in the framework's finalisation have disrupted the alignment between national climate targets and local development plans. Successful implementation will now depend on swift policy guidance to local authorities, coordinated updates to regional and local plans and robust monitoring to ensure accountability and success.

The Council has previously highlighted the need for an implementation plan for the full suite of measures adopted as part of the European Green Deal,[27] yet no obvious progress has been made. It is urgent and essential that the necessary clarity and coordination are provided to support a sustainable Just Transition.

CAP25 indicated that the first key performance indicator report, due for publication by the Department of Climate, Energy and the Environment and intended to monitor delivery against over 50 CAP23 indicators, would be published in early 2025; however, it had not been published at the time of writing in October 2025. This limits transparency and the ability to track progress, and this delay is particularly concerning to the Council. On the other hand, the Council welcomes the EPA's recent publication of quarterly emissions trends[28] based on a wide range of indicators and proxies.

In its 2024 Annual Review, the Council emphasised the importance of completing the Land Use Review and developing a clear and detailed implementation plan, including for nature protection and restoration of land for biodiversity. While Phase 1 of the Land Use Review was completed in March 2023, the commitment in CAP25 to deliver Phase 2 in Q2 2025 (Action LU/25/1) has not been met, with – very disappointingly – no indication of when it will be delivered. It remains unclear whether Phase 2 will include the urgently needed implementation plan. Following the adoption of the EU Nature Restoration Law in July 2024, the National Parks and Wildlife Service has been tasked with leading the development of Ireland's National Nature Restoration Plan. This is due for submission to the European Commission by September 2026, when Ireland will hold the rotating presidency; however, the processes to ensure its integration with wider land use and climate objectives are not clear.

f Ireland's 2030 target under the Effort Sharing Regulation is for a 42% reduction relative to 2005 levels. The EPA projection scenarios currently suggest a 9.5% reduction under the WEM scenario and a 21.5% reduction under the WAM scenario.

5. Analysis and discussion

5.1. Phasing out fossil fuel subsidies and supporting the energy transition

5.1.1. Fossil fuel subsidies

The Council has regularly called for the urgent phasing out of fossil fuels. The need to do so is becoming ever more urgent if Ireland is to meet its national and EU emissions reductions obligations.[27,29] The CSO estimates that in 2024 fossil fuel subsidies in Ireland totalled €4.67 billion, a marginal decrease from €4.98 billion in 2023 and a significant increase from €2.86 billion in 2021.[20] This sustained increase was largely a reflection of the introduction of emergency supports that arose in the context of the illegal invasion of Ukraine. The additional subsidies came primarily by way of temporary measures that reduced excise on certain energy products and electricity support payments.

Subsidies are split into two categories, direct and indirect. Direct subsidies accounted for €0.9 billion of total subsidies in 2024 and, of this, over half related to household electricity credits. Indirect subsidies typically relate to uneven pricing of energy products, where different taxes or tax rates are applied to different types and uses of fuels. Of the €3.8 billion in indirect subsidies reported in 2024, the largest subcategories related to:

- exemption of jet kerosene from excise and value added tax (VAT), alongside free allocation of Emissions Trading System (ETS) permits to airlines,
- reduced rates of VAT on energy products used for heating and electricity,
- lower rates of excise applied to diesel relative to petrol, diesel rebates for hauliers and VAT refunds on diesel consumption for businesses,
- the capacity remuneration mechanism,
- free allocation of ETS permits to industry,
- the reduced excise rate on marked gas oil (for agricultural use).

Many international bodies have called for the cessation of these subsidies. For example, the European Scientific Advisory Board on Climate Change has remarked that EU Member States should fully and urgently phase out fossil fuel subsidies,[30] set deadlines for their phasing out and redirect subsidies supporting vulnerable households towards well-targeted interventions that adequately address the regressive effects of their removal. The Intergovernmental Panel on Climate Change, in its Sixth Assessment Report (see finding C.6.4 of the Summary for Policymakers),[31] stated that removing fossil fuel subsidies would reduce emissions and yield benefits such as improved public revenue and macroeconomic and sustainability performance. It similarly acknowledges the potential for adverse distributional impacts and calls for the redistribution of revenues saved.

Ireland signed up to the Coalition on Phasing Out Fossil Fuel Incentives Including Subsidies at the 28th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP28) in Dubai.[32] The coalition is committed to greater transparency in respect of subsidies, the development of a common methodological framework, the identification of international agreements that act as a barrier to reform and to dialogue on national phasing out of fossil fuel subsidies. One of the actions of the original signatories of the coalition is to present their national plans for phasing out fossil fuel subsidies at COP30 in Belém, Brazil, in November 2025. CAP21[33] indicated that a roadmap to transition away from fossil fuel subsidies would be prepared by Q1 2024. An Irish

Government Economic and Evaluation Service paper examining the topic was published in 2023,[34] but the Council is extremely disappointed that a roadmap has not yet materialised. The finalisation of this roadmap without further delay is critical to help sustain international momentum.

Energy data from 2024 underscore the urgency of redirecting subsidies towards clean energy adoption. Ireland's total energy demand rose by 2.3% in 2024 compared with 2023, with fossil fuel use increasing by 0.7% and continuing to account for 81% of Ireland's energy supply.[19] Renewable energy contributed to just 14.5% of Ireland's energy requirements in 2024, well below the National Energy and Climate Plan target of 43% by 2030. This was up only marginally from 14% in 2023, highlighting the need for urgent acceleration of low-carbon technology adoption to meet 2030 targets.

Research indicates that co-adoption of low-carbon technologies, such as pairing solar PV with electric vehicles (EVs) or heat pumps, yields greater cost savings and emissions reductions and will be essential to achieve climate objectives.[35] Adopting one low-carbon technology can often lead to the subsequent adoption of others over time.[35] While separate incentives for low-carbon technologies already exist, a more effective strategy could be to offer bundled incentives that encourage joint adoption.[35,36] Research demonstrates a robust correlation between solar PV and EV adoption, with one European study indicating a 31% higher likelihood of owning a solar PV system if an EV is also owned, and a 7.1% higher likelihood of owning an EV if a solar PV system is also owned.[37] Another study examining global data from 14 countries found that a 1% increase in energy from renewables can provide a 2–6% growth in EV demand,[38] with similar findings evident across the literature.[39] In relation to heat pumps, evidence suggests that adoption significantly increases the likelihood of solar PV uptake within the same year and vice versa, pointing to strong bundling effects.[35] Poland's My Electricity scheme between 2021 and 2023, which offered an additional incentive for solar PV combined with heat pumps, supported the country in becoming Europe's fastest growing heat pump market in 2022, with heat pumps retaining market share into 2023.[40,41] Furthermore, bundled incentives enable households to take advantage of the synergies between solar PV and EVs — such as bi-directional charging — unlocking greater value from both technologies while reducing grid strain and maximising on-site energy self-consumption.[36]

5.1.2. Electricity prices

Evidence shows that purchase subsidies for low-carbon technologies at household level (such as heat pumps, solar PV and battery EVs) are most effective when combined with high renewable energy consumption and lower electricity prices.[39,40] Significant volatility in electricity prices in recent years as a result of the global energy crisis triggered by Russia's illegal invasion of Ukraine led to average domestic electricity prices increasing by 63% for Irish customers from Q1 2019 to Q3 2023 (€0.23/kWh to €0.38/kWh)[23] (Figure 3). Prices in March 2025 were still more than 60% higher than 2019 levels,[42,43] with the most recent Eurostat data indicating that Ireland has the most expensive electricity in the EU for both household and non-household customers before taxes are taken into account (and is among the highest after the imposition of taxes).[44] High electricity prices are a barrier to electrification, discouraging consumers from switching to cleaner electric alternatives.[45–47]

In response to the effect of the energy crisis on the price of electricity for households, the Government took reactive action in the form of increased direct and indirect fossil fuel subsidisation. Spending on direct fossil fuel subsidies (e.g. household energy credits) increased by €608 million, or 215%, in 2024 from 2021 levels, while spending on indirect fossil fuel subsidies (e.g. lowering of VAT, changing of Public Service Obligation (PSO) levy) increased by €1.2 billion, or 47%, in 2023 from 2021 levels. The subsidies provided included the following:

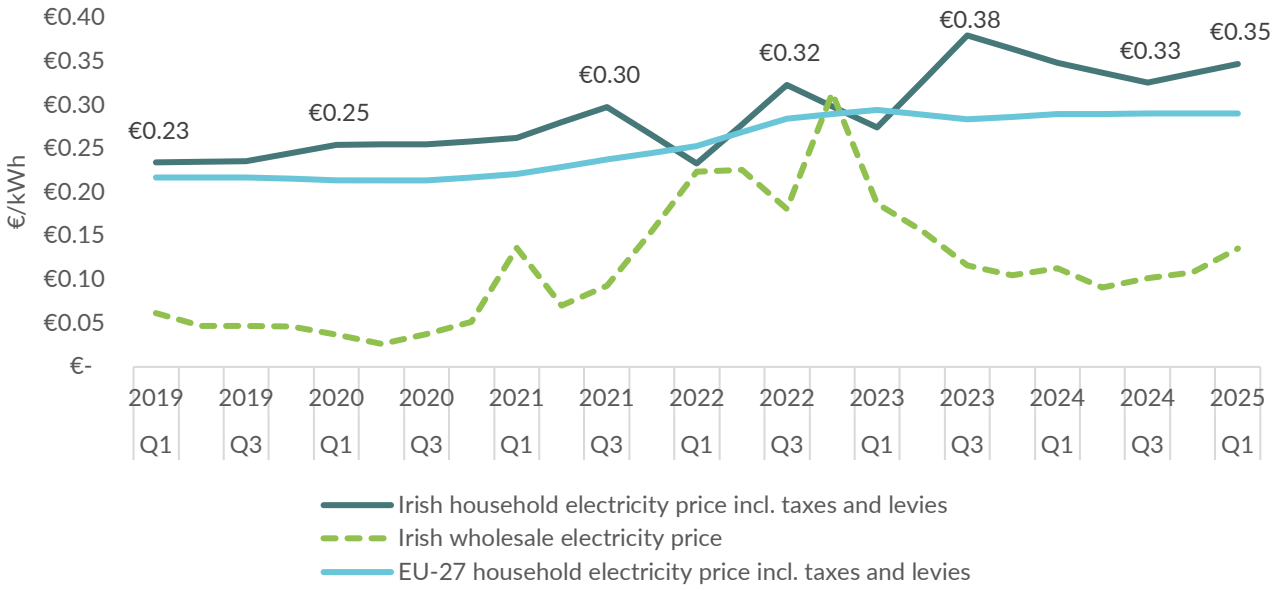

Figure 3: The average household electricity price in the context of the average wholesale electricity price and average EU household electricity price (€/kWh) per quarter.
(Sources: Sustainable Energy Authority of Ireland,[23] Commission for Regulation of Utilities[48] and Kilowatt.ie.[49])

- Energy credits were provided in:
  - four payments of €200 in April 2022, November 2022, January 2023 and March 2023,
  - three credits of €150 in December 2023, January 2024 and March 2024,
  - two credits of €125 in November 2024 and January 2025.
- VAT rates for electricity and home heating fuels were lowered from 13.5% to 9% in Q2 2022. This reduced rate was extended in Budget 2026 until 31 December 2030.
- Monthly PSO levies were adjusted by the Commission for Regulation of Utilities (CRU) to negative values in October 2022 for all (domestic, small commercial and medium/large commercial) customers. All levies were set to €0 in October 2023, and returned to positive values in October 2024.

The PSO levy is charged or credited to all electricity final customers to fund Government schemes in support of the renewable electricity feed-in tariff and the Renewable Electricity Support Scheme;[50] however, this recovery of energy transition costs through electricity bills can hinder progress towards electrification.[46] In Ireland, network tariffs or grid fees make up almost a third of electricity bills, and ESB Networks and Eirgrid are proposing an investment of €19 billion over the next 5 years (2026–2030) to maintain and upgrade the grid to meet current and future demand. This investment is necessary to support a resilient transition to net zero through electrification, while also supporting housing and population growth. However, under current proposals much of this cost will be passed onto consumers if approved by the CRU, further increasing electricity bills for consumers and therefore increasing the running costs of low-carbon technologies such as EVs and heat pumps.[51]

At EU level, the proposed revision to the Energy Taxation Directive aims to shift energy taxation to reflect climate goals, replacing volume-based taxation with a system that taxes energy products based on their energy content and environmental impact.[52] Aligning Ireland's policies with this framework would help rebalance consumer incentives in favour of clean energy.

5.1.3. Energy poverty

Energy poverty[g] is a significant issue in Ireland, with 29% of households deemed to be in energy poverty due to inflation in 2022.[53] A recent report from the National Economic and Social Council on connecting people to the energy transition highlighted that tenants in the private rental sector are among those most at risk of energy poverty.[54] However, measures like cutting indirect taxes or providing universal subsidies are poorly targeted, given that most of the revenue is spent compensating high-income households that have been least affected, with the ESRI report on Energy Poverty and Deprivation in Ireland[55] finding that high-income households accounted for most of the cost to the Exchequer of the measures introduced to address the impact of increased energy costs.

Improved welfare payments are more suitable as they are means-tested, and increasing the Pay Related Social Insurance credit is more targeted at lower earners and renters. Extended moratoriums on disconnections were implemented for the periods January–June 2021 (due to the COVID-19 pandemic) and December 2022–March 2023 and December 2023–January 2024 (due to the energy crisis) as additional customer protections. The latest figures from the CRU show that 13% of domestic electricity customers were in arrears in May 2025,[48] matching the highest recorded arrears rate previously seen in October 2024, and earlier in November 2023, May 2022, March 2022 and December 2021, indicating that a more targeted approach is required.

While increased spending on direct and indirect fossil fuel subsidies protected Irish customers from significantly increased electricity prices and prevented more households from falling into arrears (Figure 4), increased fossil fuel subsidisation is an overtly short-term and blunt policy instrument that highlights the need to support a just energy transition. It is vital that the review of fossil fuel subsidies takes this into account and prepares the ground for policies that deal more directly and efficiently with the issue of fuel poverty. The forthcoming Social Climate Plan,[56] which was due for submission to the European Commission in June of this year, should provide the Government with an opportunity to address some elements of this important issue.

The Energy Poverty Action Plan was published in December 2022 and set out a range of measures to support people with energy costs as well as longer-term actions to ensure those at risk of energy poverty can adequately heat and power their homes.[57] The Energy Poverty Steering Group outlined progress on the various actions contained in the report[58] and highlighted that a revised Energy Poverty Action Plan is especially urgent given the continued high cost of energy for households and will be essential to the continued provision of a coherent, structured, whole-of-government response to energy poverty. While a consultation on the Revised Energy Poverty Action Plan closed in May 2024,[59] disappointingly, a revised plan has still not been brought to the Government for approval and publication.[60] The Government must urgently publish the Revised Energy Poverty Action Plan (and conclude its work on the Social Climate Plan), and the Council recommends that any future supports be targeted to those in vulnerable circumstances, in fuel poverty and with a low income, as well as those in rental properties without the option of grants for retrofitting.

g ESRI defines energy poverty as households spending more than 10% of their total income on their energy needs (excluding energy for transport).

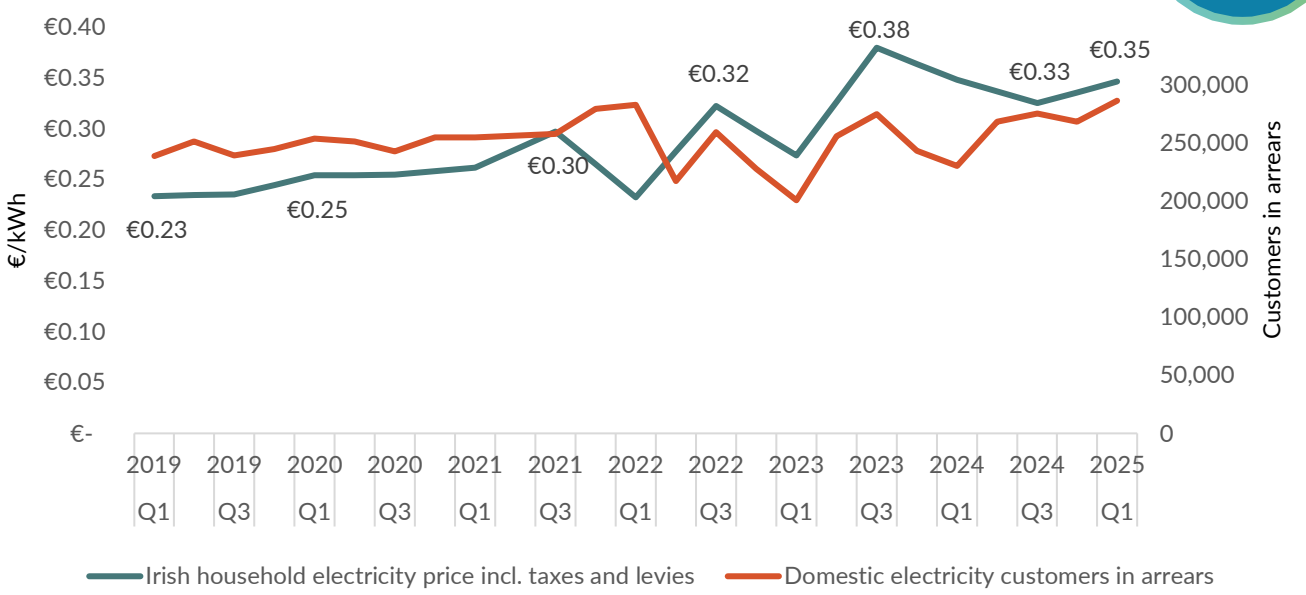

Figure 4: The number of domestic electricity customers in arrears in the context of the average household electricity price (€/kWh) per quarter.
(Sources: CRU[48] and Sustainable Energy Authority of Ireland.[23])

5.1.4. Farms and farming households

In relation to farms and farming households, recent reports suggesting that limits may soon be placed on the number of applications under the Targeted Agriculture Modernisation Scheme are a cause for concern.[61–63] To date, the scheme has issued more than €70 million to farmers,[64] including through the Solar Capital Investment Scheme, which offers 60% grant support for on-farm solar PV panels and infrastructure. The Minister for Agriculture, Food and the Marine has recently indicated that, due to the success of the scheme to date, and the fact that it is a demand-led scheme with a defined budgetary allocation, it may be necessary to introduce ranking and selection criteria for future tranches of funding.[63] If implemented, this will introduce additional administrative burdens for farmers that are likely to serve as a barrier to participation (see *Section 5.4*). Furthermore, any reduction in available grants is likely to undermine the ability of farming households and the Agriculture sector to meet emissions reduction targets, further increasing the risk of EU compliance costs for Ireland as outlined in *Section 2.2*. The Council urges the Government to increase budget allocations to this critical growth area at this time and to work towards the maximum levels of coherence across all funding agencies in order to ensure that the greatest possible impact on lowering emissions is achieved.

5.2. Ireland's European commitments

In July of this year, the European Commission published its proposal for an emissions reduction target for the EU for 2040.[65] Practically speaking, this takes the form of a proposed amendment to the EU Climate Law, which will be subject to the normal legislative procedure whereby the European Commission, European Parliament and Council negotiate and agree the final wording of the amendment. While the amendment is nominally a relatively straightforward insertion of a net

greenhouse gas emissions reduction target of 90% relative to 1990, there are also some new features included in the Commission's proposal: allowing the use of international credits, which could account for 3% of the reduction but only be used in the 2036–2040 period, the integration of permanent domestic carbon dioxide removals into the EU ETS and the promise of further flexibility between sectors. Denmark, which currently holds the EU Presidency, hopes to finalise the EU's nationally determined contribution for 2035 as a by-product of this process, although other Member States have been pushing for a decoupling of the issues,[66] particularly as there are likely to be difficulties in agreeing a parliament position on the proposal.

The flexibility between sectors has yet to be properly fleshed out. The Fit for 55 2030 policy architecture does include the ETS2, which covers the Transport and Built Environment sectors. Ireland has applied for a derogation from certain aspects of this new regime. Such derogations are subject to the conditions listed in Article 30e of the ETS Directive.[67] Irish entities that distribute fossil fuels will be registered entities under the new scheme, but, while they will need to submit monitoring reports on their total fuel usage each year, they will not have to purchase and surrender allowances in the scheme. This derogation is available because there is a carbon pricing scheme already in place for emissions with the same scope – the carbon tax. The carbon tax is due to keep increasing until 2030, when it will reach a price of €100 per tonne of carbon dioxide. This was legislated for in the Finance Act of 2020.[68]

The derogation is conditional on the assumption that the carbon price in force in Ireland will exceed the average auction price of units in the ETS2 in any given reference year. This year market makers have begun selling futures contracts for ETS2 units. The strike prices have been largely in line with those achieved in the existing ETS, with prices in the region of €70 per tonne.[69] Given that there will be quite different supply and demand dynamics in the two schemes and no fungibility of units between them, it is possible that the prices could diverge in time. There will be significant front-loading of the release of units into the ETS2 market in 2027 to try to ensure that the market can form and mature in a stable environment, alongside additional potential increases in supply in the event of a prolonged period of prices above €45 per tonne. However, this could mean that when the front-loading is reversed closer to 2030 prices may grow quickly and beyond the carbon price in Ireland, albeit that the most recent indications are that a forthcoming review of the legislation will make this an increasingly unlikely outcome.[70] The Government will need to begin to plan for the post-2030 scenario when this derogation may no longer be in place, and also ensure that uncertainty for the regulator and the regulated entities is minimised in the period to 2030.

Another aspect of EU climate law that has seen recent developments is the Carbon Border Adjustment Mechanism (CBAM). This is designed to minimise the risk of carbon leakage across the electricity, hydrogen, cement, fertiliser, aluminium and steel sectors, and will be implemented gradually in tandem with the removal of free allocation. The CBAM will come into effect in January 2026, at which time a carbon price will be levied on specific products imported into the EU. The mechanism aims to create an incentive for those seeking access to EU markets to lower the carbon intensity of their production systems. It seeks to level the playing field for EU producers of carbon-intensive goods and their foreign competitors. Importers will therefore be required to pay the same price as EU-based companies for greenhouse gases emitted in the production of those goods. The mechanism complements the ETS, which sets a price on carbon dioxide emissions, providing an incentive for firms to reduce emissions. Allowances have been trading in the range of €74–100 per tonne of carbon dioxide in recent years.

The CBAM includes direct emissions (scope 1) from all products and indirect emissions (scope 2) from the use of electricity in the production of cement and fertiliser. In the coming years, it is likely to be expanded to cover additional carbon-intensive goods. The CBAM is consistent with the general principle of 'polluter pays' and will impose a carbon price at a point in the supply chain likely to create

a meaningful incentive to reduce emissions. While the primary focus is on levelling the playing field for EU producers, it may also increase the price for consumers of the products covered, especially in markets where imports dominate local supply.

An important consideration that is not addressed within the CBAM is the emissions associated with the use of the product itself. In the Agriculture and Land Use, Land Use Change and Forestry Annual Review, the Council recommended that the Government undertake analysis of these issues with respect to chemical nitrogen fertiliser use in Ireland and the possibility that the CBAM may introduce a price signal that favours the use of calcium ammonium nitrate over protected urea, notwithstanding the lower life-cycle emissions associated with the use of protected urea.[71]

Given Ireland's deep trading relationship with the UK, the CBAM has been the subject of concern that some unintended consequences may arise. The announcement in May that the EU and the UK would work towards linking their respective schemes is welcome, but it is unclear at this time what the time horizon for this might be. The linkage of the Swiss ETS with that of the EU took almost 10 years to accomplish from initial agreement to full and final implementation, and ETS market analysts speculate that 2028 might be the earliest possible date of implementation.[72] Given that the UK scheme has only recently diverged from the EU one, it might be hoped that a quicker resolution will be possible. It would certainly be in the Government's interest to strongly pursue a quicker realisation of this linkage to minimise any possible distortionary impacts on climate or electricity policy over the coming years.

5.2.1. Transposition delays

EU legislation can take a number of forms, including regulations, decisions and directives. Regulations become immediately effective across the EU once adopted. (Decisions also become immediately effective but may not apply across the EU depending on the context.) In respect of directives, it is necessary for Member States to transpose at least some elements of these laws into national legislation in order for them to enter into force in domestic law. In regard to the Fit for 55 package, a number of the legal instruments take the form of directives and, thus, include elements of transposition, and each legal instrument sets out what the time limits are for this to take place. Ireland does not have a good recent record in terms of ensuring that directives are transposed in full and on time. A recent Parliamentary Questions session[73] revealed that Ireland had been fined €9 million for failure to transpose directives across three policy areas. The European Commission's transposition dashboard[74] reports that Ireland has an overall deficit of 1.06%, which is slightly below the EU average of 1.4%, but a deficit in the energy area of 12.5% (compared with the EU average of 11.9%) as of the end of October 2025.

In respect of the Fit for 55 package, Ireland has so far failed to transpose elements of the Renewable Energy Directive and the Energy Efficiency Directive, despite these being in force across many other Member States. Other deadlines set in regulations such as the Social Climate Fund Regulation have also been missed. This includes the requirement to submit a social climate plan by 30 June 2025. The Council is extremely disappointed and deeply concerned that transposition and other important deadlines are being missed in respect of vital elements of the Fit for 55 package. Of particular concern is the failure, thus far, to transpose Article 16f of the Renewable Energy Directive, which provides for imperative reasons of overriding public interest (IROPI) in renewable projects under specific conditions, limiting the application of Article 6(4) of the Habitats Directive, and is particularly relevant to the area of repowering onshore wind sites. In the context of maximising the current grid infrastructure through modernising and increasing the efficiency of the existing wind fleet, the Council called on planners at local and national levels to adopt a constructive approach to repowering projects, including the appropriate use of the Habitats Directive derogation for IROPI,

while ensuring biodiversity benefits and risk mitigation.[75] The Council called out this aspect of the Renewable Energy Directive in its Electricity Annual Review in 2024[76] and again in 2025[75] as being a pivotal provision that would assist in delivering on the ambitious onshore wind targets and necessary grid development for Ireland, and the continued delay in transposition is of deep ongoing concern to the Council. The European Commission's Legal Service issued Ireland with a reasoned opinion (the second stage in a formal infringement proceeding)[77] in respect of its failure to transpose these elements of the directive in July.[78] The Council calls on the Government to ensure that this and all other delayed transposition issues in the climate and energy areas are fully addressed well in advance of Ireland's Presidency of the Council of the European Union in the second half of 2026. The potential reputational damage to Ireland of being outstanding in the transposition of key elements of climate and energy directives while simultaneously holding the rotating EU Presidency is considerable.

5.3. Focusing on the delivery of compact growth

The Council has had a continuous focus on the issue of planning reform for a number of years now.[27,79,80] One key aspect of this is the need for the delivery of compact growth. Compact growth supports the efficient delivery of public services generally, reduces the extent of future demand for transport services relative to the alternative, and makes sustainable forms of transport more viable for users and suppliers alike. In this context, the Council welcomes the recent completion, albeit considerably delayed, of the review of the National Planning Framework. It will be important that the targets of the National Planning Framework are now well reflected in the update to the National Development Plan and that future development patterns are discernibly different to those of the past.

The National Economic and Social Council has recently concluded a review of this issue in its Deepening Compact Growth in Ireland publication.[81] The Council welcomes this detailed review and stresses its agreement with the main recommendations of the report. In particular, the Council would like to echo the recommendations on:

- specific targets for new housing in city centre areas,
- the development of brownfield activation strategies,
- the broadening of resourcing in forward-planning sections of local authorities,
- the importance of focusing on building strong rural communities,
- the importance of ensuring that investments that support compact growth are prioritised in the National Development Plan.

The report also draws attention to the existing targets for compact growth and the fact that these are already being exceeded nationwide. The targets in question, which are focused on the percentage of new dwellings that are located within the built-up area of Ireland's towns, villages and cities, are already being exceeded and therefore demand no additional action by local government to improve the sustainability of Ireland's future housing stock relative to the current development patterns. This strongly suggests that a higher level of ambition would certainly be justifiable. Poor historical development patterns mean that much of Ireland's population lives quite some distance from basic services. The Council repeats its call for the CSO to update its Measuring Distance to Everyday Services in Ireland publication[82] and to consider displaying the results in more geographical detail than in the original 2019 publication. This could be achieved by reporting results at local electoral area level and/or by splitting all local authorities into urban and rural areas as appropriate. Furthermore, efforts should be made in tandem with Transport Infrastructure Ireland and/or other relevant state

bodies to move the measurement of these distances to time based rather than distance based where possible.

5.4. Reducing administrative burdens/learnings from behavioural economics

The Climate Conversations 2024 Report[83] highlights growing concern in Ireland about climate change and its perceived harm to future generations. A majority of respondents (68%) expressed dissatisfaction with how climate action is being coordinated by the Government, businesses and the public, and a majority (76%) also felt that they could personally do more. This evidence, along with the latest EPA Climate Change in the Irish Mind study,[84] suggests that the public is largely supportive of climate action and willing to do more, so it is critical to identify and remove the barriers that hinder follow-up action.

A 2024 paper by the Organisation for Economic Co-operation and Development (OECD)[85] highlights how 'excessive or unjustified' frictions – such as unnecessary paperwork, excessive waiting times and a lack of information about processes – can make it harder for people to follow through on their intentions and impose psychological costs that lead to confusion, stress or disengagement. Furthermore, these frictions can exacerbate inequity in public service delivery and disproportionately affect those who rely on government services the most.

In Ireland, evidence from the EPA-funded project Administrative Burdens as Barriers to Implementation of Ireland's Climate Action Plan (ABICAP)[86] highlights how these administrative frictions within public systems can significantly impede the uptake of climate-related supports and policies. Case studies reveal how delayed communications, unpredictable timelines and excessive procedural demands deter participation, even among those motivated to act. Research further shows that administrative burdens disproportionately impact individuals who are already economically or socially disadvantaged, exacerbating inequalities in climate action.[87] These barriers not only reduce the efficiency and equity of public climate initiatives but also undermine public trust and engagement. The emerging behavioural science literature confirms that even well-intentioned policies can fail if the friction costs of accessing them are too high.

The OECD paper[85] includes nine good practice principles as actionable guidance for governments seeking to identify and address excessive or unjustified frictions. These include the use of audits – a step-by-step methodology to systematically identify and quantify excessive or unjustified frictions. The ABICAP research project has undertaken audits to identify administrative frictions associated with specific climate action policies in Ireland, such as the Afforestation Scheme, the Shared Island Sports Club EV Charging Scheme and the Solar for Schools Scheme. The method developed and tested in the project has been published in a step-by-step semi-systemic interview guide,[88] and not only identifies frictions but helps researchers to understand how these frictions impact process users who are engaging with a specific climate policy.

The outcomes of the first case study were published in 2024[89] and catalogue the cost of administrative frictions in Ireland's Afforestation Scheme as well as providing recommendations to reduce these costs. The case study revealed that unpredictable timelines in the application process serve as a significant barrier to afforestation. The high level of uncertainty surrounding grant application outcomes further complicates the decision-making process for landowners. The brief recommends streamlining information requirements, establishing clear timelines and enhancing communication to reduce friction and facilitate afforestation. Other recently published case studies consider administrative frictions in the Solar for Schools programme[90] and the Shared Island Sports Club EV Charging Scheme,[91] with recommendations on how these frictions can be addressed.

There is considerable scope to further apply this behavioural research and methodology in the Irish context, across all sectors and schemes under the Climate Action Plan. This would provide an audit of excessive or unjustified frictions to inform coordination and streamlining measures in support of the full implementation of the Climate Action Plan. The Council recommends a comprehensive review of current Government schemes that provide supports for decarbonisation, utilising behavioural research and methodologies already available in the Irish context. Outcomes from this review should be used to simplify processes and procedures to increase uptake rates of key climate action schemes.

5.5. Citizen engagement

5.5.1. People's understanding of climate change

Citizens' willingness to engage in climate action can be impacted by their own thoughts or beliefs around this issue. The EPA's Climate Change in the Irish Mind publication[92] continues to provide useful insights into the extent of public support for climate action. In the latest wave of the survey, 95% of respondents expressed the view that climate change is happening and 88% said that they felt that weather patterns in Ireland are already changing. In addition, 79% of respondents stated that climate change should be either a high or very high priority of the Government, 74% said that taking action would improve quality of life in Ireland and 56% thought that taking action to reduce climate change would improve economic growth and create jobs. Other similar surveys can provide additional insights.

A global survey carried out by Gallup and reported on in detail in the journal Nature Climate Change[93] included a statistically representative sample for Ireland (c.1,000 respondents) and looked at the issue of the difference between actual and perceived support for climate change action. The global results were encouraging, with 69% of the global population expressing a willingness to contribute 1% of their personal income to pay for the fight against climate change (with an additional 6% willing to contribute a smaller proportion). In addition, 89% of respondents stated that their national governments should do more to fight climate change. However, when asked about their perception of the broader willingness to address the issue, there were significant differences in responses, with uniformly lower percentages being reported across all jurisdictions and an average gap of 26% overall. The results for the Irish sub-sample were interesting,[94] and were broadly consistent with the findings of EPA work:[95] 88% of respondents stated that the national government should be doing more to fight climate change, and 89% of respondents felt that 'others in their country' should try to fight global warming. While 65% stated that they would be willing to make a 1% contribution, the respondents felt that only 37% of Irish residents would be willing to do the same. This perception gap is potentially very important, as it may act as a barrier to individual action. The authors conclude by calling for 'a concerted political and communicative effort to correct these misperceptions. Rather than echoing the concerns of a vocal minority that opposes any form of climate action, we need to effectively communicate that the vast majority of people around the world are willing to act against climate change and expect their national government to act'.

5.5.2. Citizen engagement in Ireland

The establishment of the Just Transition Commission in April 2024 was a key milestone, providing advice to the Government on how to address the inequalities resulting from the impacts of climate change. The commission's subsequent terms of reference identifies its role in supporting the National Dialogue on Climate Action and its areas of wider engagement. The Council will work closely with the Just Transition Commission, with a memorandum of understanding now in place for the two bodies.

The Council has consistently highlighted the importance of coordinated, well-resourced and meaningful engagement with civil society to support behavioural change and ensure a fair and inclusive transition. The National Dialogue on Climate Action continues to deliver its work, including the Climate Change Lecture Series, the annual National Climate Change Conference and the National Climate Stakeholder Forum sessions. Between 2021 and 2024, over 15,000 members of the public were engaged through the National Dialogue on Climate Action, with feedback pointing to the need for more joined-up thinking and more ambitious policies to be implemented at local level.[24] In addition, the National Youth Assembly on Climate provides an important opportunity for youth delegates to explore and make recommendations on important climate change issues and feed directly into Government. The Climate Conversations initiative also took place in 2024, and the related report, published in June 2025, reflects the views of almost 2,000 participants who took part via on online survey. While this does not constitute a two-way 'conversation' in the traditional sense, the findings do reveal a growing concern about climate change and, in particular, its potential impact on future generations. The report also highlights persistent misconceptions about the emissions impact of everyday actions, notably an underestimation of the benefits of EV adoption and an overestimation of the impact of recycling. Among the key recommendations made was the establishment of community climate hubs, a proposal the Council strongly supports as a means to strengthen two-way engagement with local communities and bolster participation in climate action.

In September 2024, the Government launched the Climate Actions Work campaign and fund to enable people and communities across Ireland to engage with and further drive climate action. This multifaceted approach aims to enhance community action on the ground and bring groups together to bring scale and efficiencies to climate actions. In addition, local government continues to be at the forefront of local citizen engagement through decarbonising zones (DZs) and the work of climate action regional offices. Providing appropriate resources to support this work is fundamental to bringing people together to adopt the actions necessary to address climate change in a community setting. A review of the Climate Actions Work campaign will hopefully draw out the work conducted through this programme and identify further requirements that will support local action.

While coordinated action locally has been further funded and driven by the Climate Actions Work programme, the Institute of Public Administration, in its review of climate action capacity within the civil service[96] recommended that the Government:

> Review and finalise the respective roles of the CCC [Climate Coordination Committee] (DT [Department of the Taoiseach]) and the Climate Engagement Taskforce (DECC [Department of the Environment, Climate and Communications]), with a view to finding ways in which both initiatives can work together to engage the public more widely and promote a much-needed positive narrative/vision of a more sustainable and climate-resilient future and the potential pathways to get there.

In its response, the Climate Action Delivery Board advised that efforts are under way to address this recommendation. To further enhance this work, a review of and change to centralised online communications would be an important step to support the hard work that is currently taking place nationally and locally. While the mapping of climate actions across Ireland is a welcome step in improving the presentation of local climate initiatives online, there remains a need to give further prominence to locally relevant online climate action information. This would promote greater interactivity and assist the public in engaging with local climate action initiatives and sourcing information about climate action.

5.6. Supporting the skills transition

The National Climate Objective challenges society to take urgent action and make substantial investments in both mitigation and adaptation across all sectors. Many actions will require new skills and training to install, operate and maintain low-carbon solutions and implement effective adaptation measures.

It is well understood that climate action will create diverse and rewarding employment and investment opportunities. Indeed, the opportunities are of such a scale that there is significant concern that the current labour and investment systems may not be able to keep pace with demand, leading to delayed climate action and inflation of the cost of transition due to scarcity in supply of skills and labour.

The Ireland's Talent Landscape 2025 report, published by Skillnet Ireland, surveyed 500 Irish small and medium-sized enterprises (SMEs) and identified some key concerns and barriers that constrain the capacity of firms to prepare for the emerging skills environment.[97] Findings from the report that are worth highlighting include the following:

- A high proportion of SMEs report challenges in recruiting employees with the necessary technical and engineering, regulatory and/or climate sustainability skills.
- Similar concern is reported in identifying appropriate training and upskilling opportunities in these areas for existing employees.
- Among those who participated in upskilling over the past year, only 26% received training specifically related to climate action and sustainability.
- The main barriers preventing upskilling include:
  - existing commitments,
  - a lack of industry-specific courses,
  - the cost of training/lack of funding,
  - uncertainty about what courses are available,
  - accessibility and mode of delivery.

The National Skills Bulletin 2024 reported that in January 2023 Ireland reached record employment rates, with 2.68 million people employed.[98] In January 2025, the unemployment rate was 4.0%, the lowest in nearly 25 years, suggesting that the economy is operating at close to full employment.[99] The additional investment required for climate action and transition will create increased competitiveness within an already tight labour market, particularly with respect to highly skilled and labour-intensive activities.

SMEs represent the vast majority of enterprises in Ireland, with micro enterprises alone accounting for 92.6% of all businesses (Table 5). Given their scale, SMEs play a critical role in driving the decarbonisation of Irish enterprise. They are also key contributors to the gathering and coordination of data across business operations, particularly in relation to climate action efforts.[100]

SMEs and certain groups within the workforce may encounter greater difficulty in accessing upskilling and reskilling opportunities, creating barriers to fully engaging with the benefits of the transition. The findings from surveys carried out by University College Cork[102] in 2022 and Uisce Éireann[103] in 2024 illustrate that SMEs continue to identify a lack of knowledge, skills, time and costs as barriers to the

Table 5: SMEs in Ireland.
(Source: CSO.[101])

Enterprise size	Number of persons employed	Share of all enterprises (2021)
Micro enterprises	< 10	92.6%
Small enterprises	10–49	6.1%
Medium enterprises	50–249	1.1%
Total SMEs (< 250 employees)	< 250	99.8%
Large enterprises	250+	0.2%

adoption of sustainable business practices. The Government needs to identify incentives to support SMEs to overcome these barriers.

Certain positions and jobs are likely to become obsolete in the transition to a low-carbon economy, particularly those in sectors heavily reliant on fossil fuels or carbon-intensive products; those held by individuals who are low-skilled or have limited qualifications; and those held by people in precarious employment situations.[104] Vulnerable workers include younger and older workers, those with language barriers and those with disabilities.[105] It is essential that a vulnerability assessment across sectors be undertaken to identify those employees who are vulnerable to the transition. This assessment will allow targeted incentives to be developed to support upskilling or reskilling to ensure that vulnerable workers are not left behind.[104,106] The Just Transition Commission has been tasked with undertaking 'an analysis of the potential impacts on Ireland's workforce, and policy implications, of achieving the statutory 2050 climate neutrality objective'.[106] Apprentices will play a crucial role in the transition to a low-carbon economy. There is an urgent need to attract new apprentices into the labour force, targeting those skills and trades required for the transition. This will help to meet the increased demand for construction workers, electricians, plumbers and workers in other trades.

The Government's 2021 target of 10,000 new apprentice registrations per annum by 2025 has been largely successful,[107–109] with annual increases in new registered apprentices steadily increasing from 5,326 in 2020 to 9,000 in 2024.[110] It is encouraging to see the increase in new registrations; however, this number will need to further increase to meet the growing demand for labour across specific sectors up to and beyond 2050. For example, a recent report that analysed the skills needs for residential construction and retrofitting up to 2030 estimated a need for 69,000 new entrants into the sector by 2030.[111] To meet the targets of delivering 350,000 new homes and retrofitting 444,106 existing dwellings by 2030, an average of 6,039 additional designated craft workers[h] will be required annually. Around 60% of this workforce will be needed for new home construction, while approximately 35% will support the retrofitting of nearly 450,000 existing homes. This demand is in addition to the labour required for ongoing housing maintenance and repair.[112] A more realistic and attractive wage could incentivise more new entrants to join apprenticeship programmes relevant to transition. Although some argue that the vocational and educational nature of apprenticeship justifies lower pay rates, the high cost of living in Ireland compared with other EU countries must be

h Crafts that require successful completion of an apprenticeship are referred to as designated crafts.

Table 6: The hourly wages for electrician and construction apprentices in Ireland.
(Sources: Connect Union[117] and the Workplace Relations Commission.[118])

Year of apprenticeship	Electrician apprentice hourly rate for 2024	Construction apprentice hourly rate for 2025 (includes plumbers)
First	€9.16	€7.41
Second	€11.78	€11.12
Third	€17.01	€17.25
Fourth	€20.94	€20.70
Newly qualified	€26.17	€17.28–23.74
Completion of 5 years' service	€27.14	–

considered.[113,114] Currently, the 77 apprenticeship programmes are exempt from national minimum wage requirements.[115] The current standard minimum wage is €13.50 per hour, while, in its most recent review, the Living Wage Technical Group estimates the living wage[i] for Ireland to be €14.75 per hour[116] (2024/2025). For comparison, Table 6 shows the hourly wage for electrician and construction apprenticeships.

Another comparison can be made with starting rates at major retailers; for example, on its website Aldi advertises pay and benefits for its store assistants ranging from €15.10 per hour to €17.40 per hour.

SOLAS is the state agency responsible for further education and training (FET) in Ireland. SOLAS manages, coordinates and funds the delivery of FET and has, among other obligations, a statutory responsibility for design and certification of apprenticeships and construction schemes such as Safe Pass and the Quarries Skills Certification Scheme. SOLAS should play a crucial role in ensuring that the current and future labour force is ready to take on roles in the transition to climate neutrality.

SOLAS recently published its Green Skills 2030 strategy, which provides a valuable foundation for understanding what skills are needed for future workforce development. However, the strategy lacks long-term foresight beyond 2030 and does not specify the number of individuals across sectors who will require training in various skill areas. This gap makes it challenging to effectively monitor and align national labour demand and supply.

i The living wage is the average gross salary that enables a full-time employed adult (without dependents) across Ireland to afford a socially acceptable minimum standard of living.

SOLAS must establish a robust mechanism to conduct ongoing skills needs analysis to 2050 and beyond. The establishment of the National Skills Observatory,[j] Ireland's first centre for skills and labour market intelligence, will support this process.[119,120] A good example of a skills gaps analysis was undertaken by BVG Associates to inform the national Offshore Wind Skills Action Plan 2024. This could serve as a useful template for assessing the level of detailed analysis required to move beyond a strategic vision for the sector to the design and implementation of a planned development programme.[120,121] For instance, the report estimates the jobs demand to 2040, as well as the environmental and planning roles (including marine ecologists, environmental impact assessment managers and ornithologists) and the current skills shortfall in this area. SOLAS should also assess the time required to design, implement and deliver training programmes that will prepare the workforce to support and sustain a climate-neutral economy.

A recent report by Skillnet Ireland examined the skills, talent and workforce development needs of business leaders across the country.[97] The findings revealed significant challenges in recruiting individuals with expertise in regulation, technical and engineering disciplines, and climate action and sustainability, all of which are essential to supporting Ireland's transition.

The Government must invest in SMEs, apprentices and employees, particularly those who are the most vulnerable, to ensure that they have the opportunity and incentive to reskill and upskill in order to take up the opportunities arising from transition. The incentives could include support for competitive payments for apprenticeships and payments for completion of relevant FET courses. The Council also recommends that SOLAS be provided with the necessary resources to support the promotion of career opportunities arising from the green transition, including the integration of green skills into all relevant FET programmes.

5.7. Climate governance

In early 2025 the OECD published a major study proposing that governments should consider the use of missions in climate governance.[122] The study defines a mission as a 'clearly defined, ambitious policy objective aimed at addressing a complex societal challenge within a specified timeframe, requiring coordinated action across multiple sectors'. Within the study, 15 dimensions were identified across the themes of structure, orientation, coordination, execution and resources. Two particular dimensions that were categorised as 'under-explored' were ecosystem mobilisation and innovation and exploration.

The study noted that ecosystem innovation is often limited to stakeholder consultation rather than active involvement in delivery and that, while countries are experimenting with forms of private–public collaboration, building capacity for wider involvement is underdeveloped. In relation to innovation and exploration, the study found limited mention of this in national climate advisory body reports as well as a disconnect between research and development funding programmes and climate governance

j A working group was established by the National Skills Council to develop a proposal for the establishment of an entity, the National Skills Observatory, that could address the need for a cohesive approach to collecting, using and sharing skills and labour market data. It is envisaged that the National Skills Observatory will be Ireland's centre for skills and labour market intelligence across the labour market, including the public and private sectors. The proposed structure of the National Skills Observatory will build on the existing expertise of the Skills and Labour Market Research Unit based in SOLAS, and will be reinforced by a governance structure spanning both the higher education and further education systems. The proposal was endorsed by the National Skills Council at its meeting on 30 April. The National Skills Council supports its progression via the estimates process and the allocation of initial funding via Budget 2026.

arrangements. The study also found that there is potential to bridge the gap between innovation policies and climate goals.

In Ireland, all local authorities have now identified DZs, providing scope to address some, if not all, of these deficiencies, particularly in the areas of mobilisation and innovation. The Decarbonising Zones Advisory Group was formed by the Department of Climate, Energy and the Environment and the Sustainable Energy Authority of Ireland in 2024 to explore the strategic opportunities and challenges that DZs present, and to consider issues that may arise from implementation and bottlenecks in the system, whether they be related to regulatory issues, policy alignment, capacity and resourcing or other factors. This is a welcome development. The Council recommends that this group produce regular reports detailing the most successful actions being taken at local level to mobilise greater activity among communities, and ensure that these reports are given the widest possible coverage so that the impacts of actions taken in DZs are well understood beyond the confines of local government. It will be vital to underpin this action with sufficient funding from central Government to all local authorities and, as previously recommended by the Council,[123] the regularisation of climate-related posts by the Department of Housing, Local Government and Heritage to support innovative and high-impact schemes at local authority level.

In October 2024, the Institute of Public Administration published its final review of climate action capacity within the civil service.[96] The Climate Action Delivery Board, which plays a central role in climate governance in Ireland, made a number of key recommendations in its response to the review across the areas of leadership and governance, policy development and climate action planning, knowledge and evidence, resources, and stakeholder engagement/communications.[124] These are critical for driving government efficiency, particularly in providing crucial leadership in the delivery of policies under Climate Action Plans, and should be addressed and reported on in Climate Action Plans going forward.

The quarterly reporting of progress on Climate Action Plans[125] has brought a welcome level of transparency to the process of tracking implementation. Notwithstanding this, the level of on-time delivery of actions has been very disappointing. In the most recent publication, only 10 out of 64 legacy actions (i.e. those actions that were already delayed) are marked as complete. A less pressing but nonetheless recurring issue with the publication of these reports is the lack of regularity and predictability of publication; the Council urges the Government to publish its implementation updates every quarter and in tandem with a press release. Furthermore, it is also recommended that quarterly reports be simplified to ensure efficiency in reporting, with the focus being on the Annex of Actions. This may also cut down on the resources required to produce the report and shorten publishing times for quarterly reporting.

A further issue is that, while Climate Action Plans have made reference to the Council's recommendations and leverage them where useful, it would enhance the overall governance and transparency of Irish climate policy if the Government were to provide updates in respect of all recommendations in each part of the Council's Annual Review. For example, Section 5.1 of CAP25 lists the key recommendations from the 2024 Cross-sectoral Annual Review. It states that 'recommendations in the CCAC Annual Review are addressed in the relevant chapters of this Climate Action Plan, and have been incorporated into policies, measures and actions in so far as it is possible to do so'. However, in Chapter 22 on adaptation, for example, while the publication of the Annual Review 2024: Preparing for Ireland's Changing Climate is referenced, there is no discussion of the recommendations therein.

5.8. Investment in climate adaptation

Investing in climate adaptation is essential for mitigating the adverse effects of climate change but also delivers economic, social and environmental benefits. Globally, a recent World Resources Institute study found that climate adaptation investments yield over $10 for every dollar spent, with average annual returns on investment of 20–27%.[126] Despite this, investment in adaptation remains far below what is needed internationally, as well as in the Irish context. The United Nations Environment Programme's Adaptation Gap Report 2024 estimates the global adaptation finance gap to be between US$187 billion and US$359 billion per year.

In Ireland, Government departments and local authorities have highlighted the inadequacy of financial resources for adaptation and the need for stronger support from the Department of Expenditure, National Development Plan Delivery and Reform to ensure that sufficient resources are in place to deliver adaptation policies and projects. While information on the levels of investment needed remains lacking overall, work on estimating the level of economic losses associated with climate change continues to advance, which should assist in assessing the actual amounts of investment required. Recent ESRI research estimated the impacts of climate change under a range of scenarios and indicated a possible contraction of gross domestic product by over 2.5% in 2030, 2040 and 2050 under the Representative Concentration Pathway (RCP) 4.5 scenario without adaptation.[127] Given Ireland's vulnerability to climate impacts and the significant ongoing expansion of energy, water, transport and housing infrastructure, it is critical that effective adaptation measures are put in place to reduce exposure and vulnerability to physical climate risks.

Ireland's first National Climate Change Risk Assessment, published in June 2025, sets out priority climate risks and establishes a strong, common basis for national and sectoral climate change risk assessment in Ireland. It is based on two emissions scenarios – a moderate emissions scenario (RCP4.5) and a high emissions scenario (RCP8.5) – and assesses risk for three time periods: up to 2030, 2050 and 2100. A total of 115 risks are identified across nine systems,[k] and 43 of these risks are considered significant, requiring additional action over the next 5 years to increase resilience. The most urgent risks to be addressed are the following:

- Extreme wind poses significant risks to energy transmission and distribution infrastructure, as well as to communication infrastructure. The widespread outages caused by Storm Éowyn in February 2025 illustrate these vulnerabilities, with insurance claims surpassing €301 million, making it the most expensive storm-related insurance event in the nation's history.[128]
- Coastal areas, especially in and around Dublin, the southeast and the southwest, are highly vulnerable to erosion and flooding, with buildings and transport infrastructure particularly exposed. Impacts are expected to increase under all climate scenarios.
- Flooding is projected to become more frequent and severe, driven by changing precipitation patterns. River, surface-water and groundwater flooding events put buildings and transport infrastructure at greater risk, with the consequences of these risks increasing to a critical level by mid-century. Flooding also poses significant threats to both physical and mental health.
- Extreme heat is projected to become a major risk by the end of the century, due to more frequent and intense heatwaves, a growing population and increased numbers of vulnerable individuals. Rising average temperatures present growing risks to public health.

k The nine systems in the National Climate Change Risk Assessment are biodiversity and ecosystems, the built environment, economy and finance, energy, food production and supply, health, marine and coastal ecosystems, social and water security.

Sectoral adaptation plans, the next iterations of which are to be submitted to the Government for approval in Q4 2025, must prioritise measures that address the risks identified in the National Climate Change Risk Assessment and increase resilience across sectors. This needs to be accompanied by high levels of ambition and the scaling up of investment across departments to prioritise adaptation and resilience measures in relevant budgets, schemes and supports. While the Government has a central role in financing adaptation, there is a need to create a suitable enabling environment for private investment in adaptation.[129] This should include consideration of financial incentives (such as tax relief), regulatory or technical support, and de-risking instruments (such as Government guarantees, risk-sharing instruments, concessional finance or climate risk disclosure frameworks) to reduce barriers for both project developers and institutional investors.

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