

CLIMATE
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ANNUAL REVIEW 2026



Industry and Waste

Annual Review 2026: Industry and Waste

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

Tel: 01 2680180

Email: info@climatecouncil.ie

www.climatecouncil.ie

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Marta Carrasco

Meabh Gallagher

Bryn Canniffe

George Hussey

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Summary for All

Key observations

In 2025, industrial emissions fell for the fourth consecutive year and are now 15.9% below 2018 levels, accounting for 11.4% of Ireland's emissions. Cement emissions fell by 3.6%, despite slightly higher production, reflecting reduced clinker content and increased use of alternative fuels. Dairy processing emissions rose by 3.6%, with milk production increasing by 4.8%. The shift from fossil fuels to renewable electricity, bioenergy and hydrogen has not progressed in line with targets for industrial decarbonisation. Ireland remains substantially off track in achieving the 2030 target for indigenous biomethane production, due to piecemeal implementation of the National Biomethane Strategy and the absence of a clear economic case for production.

Waste emissions, which are dominated by methane emissions from landfill, fell by just 0.4% in 2025. Ireland's municipal recycling rate has remained largely unchanged over the past decade and reached only 43% in 2024, significantly short of the EU target of 55% by 2025. The recycling rate for packaging waste was 60% in 2024, well below its peak of 74% in 2012. Ireland's circularity rate is the second lowest in the EU, highlighting the need for stronger and more effective action on the circular economy.

Key recommendations

Industrial heat decarbonisation

An indigenous biomethane supply is critical to decarbonising high-temperature industrial processes that are difficult to electrify. The Government should urgently finalise the Renewable Heat Obligation to kick-start biomethane production and, in parallel, introduce a separate, EU-compliant support scheme for indigenous biomethane generation. The Government should reduce the delays and costs associated with electricity grid connections, which are constraining the electrification of low- and medium-temperature industrial processes.

Low-carbon cement and concrete

The National Standards Authority of Ireland should urgently develop new standards and accelerate the approval process for low-carbon cement and concrete technologies, and the Government should provide the necessary legal and policy frameworks to enable carbon capture, transport and storage in Ireland, with a particular focus on applications in cement and lime production.

The circular economy and timber in construction

The Government should accelerate the implementation of the Circular Economy Strategy 2026–2028, including publishing a construction sector circularity roadmap by the end of 2026 and the timely transposition of the Waste Framework Directive by June 2027. The Government should also establish a permanent wood knowledge development and innovation facility, supported by a national industry forum, to address technical and commercial barriers to the use of Irish timber in higher-value construction products.

Climate resilience

The Government should expand guidance and financial support for small and medium-sized enterprises to assess climate risks, implement adaptation measures and adopt water-efficiency measures. The Government should also commission an economy-wide assessment of Ireland's exposure to transboundary climate risks, including risks to overseas supply chains.



Abbreviations

Abbreviation	Definition
BECCS	bioenergy with carbon capture and storage
C&D	construction and demolition
CAP	Climate Action Plan
CCUS	carbon capture, utilisation and storage
CRU	Commission for Regulation of Utilities
CSB	commercial State body
DCEE	Department of Climate, Energy and the Environment
DETE	Department of Enterprise, Tourism and Employment
EPA	Environmental Protection Agency
EPBD	Energy Performance of Buildings Directive
F-gas	fluorinated gas
GWP	global warming potential
LEAP	Large Energy User Action Plan
NCCRA	National Climate Change Risk Assessment
NSAI	National Standards Authority of Ireland
RHO	Renewable Heat Obligation
SEAI	Sustainable Energy Authority of Ireland
SEC	sectoral emissions ceiling
SMEs	small and medium-sized enterprises
TCR	transboundary climate risk
WAM	with additional measures
WEM	with existing measures



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Key observations

Industry emissions and trends

- ▶ Industrial emissions relating to manufacturing combustion and industrial processes combined accounted for 11.4% of Ireland's total emissions in 2025, or 6.0 Mt CO₂ eq.^[1]
- ▶ Industrial emissions fell for the fourth successive year, decreasing by 3.3% in 2025, and are now 15.9% lower than 2018 levels, based on the Environmental Protection Agency's 2025 provisional inventory report.^[1]
- ▶ Cement industry emissions decreased by 3.6% in 2025 despite a small increase in production levels, due to reduced clinker content and increased alternative fuel use.^[2] Approximately 50% of cement produced in Ireland is exported, primarily to the UK, where fluctuations in demand and price differentials can impact cement production in Ireland.
- ▶ In 2025, greenhouse gas emissions from dairy processing plants increased by 3.6%^[2] following a 4.8% increase in milk production,^[1] while emissions from the food and drink sector decreased by a 2.1% overall.^[1] Emissions from the bulk manufacturing of pharmaceuticals decreased by more than 4%^[2] following a 5% rise in 2024.^[3]
- ▶ The Climate Action Plan 2025 sets a target of 5.7 TWh of biomethane production by 2030;^[4] however, the latest Environmental Protection Agency projections have revised the with additional measures scenario to model only 1.75 TWh of biomethane use across the heat sector by 2030, down from 4.3 TWh in the previous year's projections.^[5] This reduction reflects the piecemeal implementation of the National Biomethane Strategy and the lack of a clear economic case for biomethane production to date.

Waste and fluorinated gases emissions and trends

- ▶ In 2025, waste emissions decreased by 0.4% and accounted for 1.6% of total national emissions.^[1] Waste sector emissions are projected to reduce by 23.9% by 2030 from 2018 levels, driven almost entirely by a 34.5% reduction in landfill emissions.^[5] Methane emissions from landfill are the main contributor to emissions from the Waste sector.^[1]
- ▶ The most recent data, from 2024, indicate Ireland generated 16.7 million tonnes of waste,^a equivalent to 8.5 kg per person per day, with Ireland's annual waste generation having increased by over 20% in the last decade. There have been modest increases in recycling rates of 1% for both municipal waste and packaging waste, bringing the respective recycling rates to 43%^[6] and 60%.^[7] Ireland will miss the EU municipal waste

^a Based on Environmental Protection Agency waste statistics submitted under the EU Waste Statistics Regulation (2150/2002) and pending validation from Eurostat.



recycling target of 55% for 2025, with the national rate remaining stagnant at around 40%,^[6] with no significant change in 10 years, while the packaging waste recycling rate is considerably lower than its 2012 peak of 74%.^[7]

- ▶ Ireland's circularity rate continues to underperform against the EU average of 12.2% and is currently the second lowest in the EU rankings, decreasing from 2.1% in 2023 to 2.0% in 2024, highlighting the need for a significantly enhanced focus on impactful actions in the circular economy.^[8]
- ▶ Fluorinated gases (F-gases) are utilised in air conditioning and refrigerant gases. Their emissions remained relatively stable and accounted for 1.2% of total national emissions in 2025.^[1] Following F-gas regulation at the EU level, there is a projected decrease of emissions of up to 56% by 2030 from 2018 levels due to F-gas phase-out.^[5]

Key recommendations

Industrial heat decarbonisation

1. The Council has repeatedly and with ever growing urgency stressed the importance of developing an indigenous biomethane supply for decarbonisation. Finalisation of the Renewable Heat Obligation scheme is urgently required to kick-start anaerobic digestion production. The Government must learn from the failings of the first capital grant scheme to improve the second phase of market supports from 2026 to 2030, and in doing so launch a parallel indigenous biomethane generation support scheme that is bankable and EU compliant, rather than trying to force all support through the Renewable Heat Obligation to accelerate anaerobic digestion production in Ireland.
2. Delays in receiving grid connections in industrial settings are continuing to stall progress in decarbonising the Industry sector. The Council reiterates its previous recommendation that the Commission for Regulation of Utilities and ESB Networks reduce electricity grid connection costs, timescales and challenges related to switching from unabated fossil fuel use for low- to medium-temperature industrial heat decarbonisation.

Low-carbon cement and concrete

3. There has been a growing backlog of proposed low-clinker solutions and overall stalling of progress with regard to decarbonised concrete standards in the National Standards Authority of Ireland's Concrete Committee at the very time that it should be accelerating approval. The Council reiterates its previous recommendation that the Concrete Committee urgently develop new standards and accelerate the approval process for low-carbon cement technologies.



4. The Government should reform the legal framework to enable commercial carbon capture, transport and storage in Ireland. The Government should also establish a comprehensive enabling policy framework for carbon capture, utilisation and storage, covering CO₂ transport, temporary storage, shipping and cross-border storage agreements, with a particular focus on applications in cement and lime production.

The circular economy and timber in construction

5. The Government should explicitly position itself to provide leadership on the circular economy at the EU level, including during Ireland's presidency of the Council of the EU, in advance of the forthcoming EU Circular Economy Act. This would also provide an opportunity for the Government to drive decisive domestic action via the Department of Climate, Energy and the Environment's accelerating actions published in the Whole of Government Circular Economy Strategy 2026–2028. These must include the publication of a circularity roadmap for the construction sector by Q4 2026 and the transposition of the Waste Framework Directive to ensure compliance with the EU deadline of June 2027.
6. To drive timber innovation, investment and adoption to capture domestic supply, the Government should establish a wood knowledge development and innovation facility, which would serve as a permanent platform for strategic coordination among critical stakeholders, including industry, researchers and government bodies. This should be complemented by a national, permanent industry forum to address technical and commercial barriers that currently limit Irish timber use in higher-value construction products.

Climate resilience

7. The Department of Enterprise, Tourism and Employment, Enterprise Ireland, the Sustainable Energy Authority of Ireland, the Sustainable Banking Corporation of Ireland, IBEC and Uisce Éireann should review and expand their grant and low-cost loan programmes to explicitly support climate change adaptation for small and medium-sized enterprises, providing access to guidance, tools and financial supports to assess risks and implement effective adaptation measures. Specific supports to help small and medium-sized enterprises adopt water-efficient technologies should be developed to reduce demand and emissions relating to water treatment and heating.
8. The Government should initiate a dialogue with industry associations to exchange views and clarify responsibilities on the risk management of overseas supply chains arising from transboundary climate impacts. A comprehensive, economy-wide assessment should be commissioned to quantify the economic costs of transboundary climate risks to the Irish economy, including supply chain risks. It should highlight vulnerable sectors and risk management needs in the public and private sectors.



1. Introduction

The Industry and Waste Annual Review includes emissions from five separate subsectors that are reported on as part of the national greenhouse gas inventory. Mainly associated with production processes, they are manufacturing combustion, industrial processes, fluorinated gases (F-gases), petroleum refining and the Waste sector. The emissions associated with each subsector are detailed below.

- ▶ Emissions from manufacturing combustion arise from fossil fuel combustion used in various industries (e.g. production of alumina, pharmaceuticals and cement) and include emissions from combustion for combined heat and power systems for use in these industries.
- ▶ Industrial process emissions encompass emissions from mineral, chemical and metal industries, non-energy products and solvents. The majority of industrial process emissions come from the production of cement at four cement plants in Ireland.
- ▶ The key sources of F-gas emissions in Ireland are the production, use and disposal of equipment containing these gases (e.g. refrigerators, mobile air conditioning systems, heat pumps and electrical switchgear).
- ▶ Petroleum refining covers emissions generated during the refining of crude oil into products such as petrol, diesel, kerosene and other fuels.
- ▶ Emissions from the Waste sector include those from landfill and the open burning of waste, mechanical and biological treatment and wastewater treatment. Methane emissions from landfill are the main contributor to emissions from the Waste sector.

Emissions from industrial processes and manufacturing combustion together accounted for 11.4% of the national total greenhouse gas emissions in 2025, with the Waste sector, F-gases and petroleum refining accounting for 1.6%, 1.2% and 0.5% of national total greenhouse gas emissions, respectively.^[1] Emissions reductions achieved through increased fuel switching, energy efficiencies and electrification are urgently required to remain within sectoral emissions ceilings (SECs). Additionally, it is extremely clear that Ireland's progress towards a circular economy is stalling. A significant reduction in the generation of waste is required to meet Ireland's EU commitments, supported by increased recycling rates and spending on new circular economy infrastructure.

2. Sectoral emissions ceilings and Climate Action Plan targets

The SEC for the Industry sector and the 'Other' sector are detailed in [Table 1](#), showing that the Industry sector has provisionally exceeded its SEC for 2021–2025 by 9.1% or 2.7 Mt CO₂ eq. The Other sector has provisionally stayed within its ceiling by approximately 2.4% or 0.2 Mt CO₂ eq. Climate Action Plan key performance indicators for the Industry sector include a 70–75% share of renewable heat in industry and a 30% decrease in embodied carbon in construction materials.

However, no pathway to implementation is outlined in the Climate Action Plan for these targets and they are not specifically modelled in the latest Environmental Protection Agency (EPA) projections. The key performance indicators for the Industry sector need to be improved in the Climate Action Plan 2026 (CAP26) by including more detailed and measurable targets and clear implementation pathways.



Table 1: Reported emissions for 2021–2024 and provisional emissions for 2025 in the context of the SEC for the first carbon budget period, 2021–2025.

*The Other sector, as defined in the SECs, covers emissions from F-gases, waste and petroleum refining.

(Sources: Ireland's Final Greenhouse Gas Emissions 1990–2024^[9] and Ireland's Provisional Greenhouse Gas Emissions 1990–2025.^[1])

Sector	Carbon budget period	SEC	Provisional emissions, 2021–2025	Provisional SEC used, 2021–2025
Industry	2021–2025	30 Mt CO ₂ eq	32.7 Mt CO ₂ eq	109.1%
Other*	2021–2025	9 Mt CO ₂ eq	8.8 Mt CO ₂ eq	97.6%

3. Indicators

3.1. Industry emissions and main trends

Fuel switching from carbon-intensive energy sources to a diverse range of alternative energy sources, including renewable electricity, hydrogen, bioenergy and waste, is essential for the decarbonisation of the Industry sector. However, based on the most recent available final energy balance for 2024, the Industry sector's fuel mix (Figure 1) has remained stagnant for the last decade.^[10]

Electricity and renewable fuel usage as percentages of total final consumption increased only slightly over the past two decades, from 26.1% and 6.4%, respectively, in 2005, to 27.3% and 8.6%, respectively, in 2024.^[10] Overall, while there have been significant reductions in coal and oil use in the past decade, this period saw an increase in fossil gas consumption, which accounted for 42.9% of energy consumption in 2024, rather than an increase in the use of renewables and electrification.

EU Emissions Trading System data indicate that Irish industrial emissions decreased by 2.5% in 2025, driven by a variety of factors, including the use of alternative, lower-carbon fuels and a decrease in clinker production in the cement sector.^[2] The five largest emitters accounted for approximately 70% of industrial CO₂ emissions in 2025, with the largest emitter being Aughinish Alumina in the non-ferrous metals sector, producing 1.11 Mt CO₂ eq, a 2% decrease on 2024. Cement production accounts for the next four largest emitters, with their emissions totalling 2.2 Mt CO₂ in 2025 or 4.2% of national total emissions.^[11]

The EPA's 2025 provisional greenhouse gas inventory estimates a year-on-year decrease of 3.9% or 0.2 Mt CO₂ eq in emissions arising from fossil fuel use in the Industry sector, driven by fossil fuel usage reductions for the year, with coal, oil and fossil gas use decreasing by 25.5%, 6.5% and 2.7%, respectively, whereas renewable fuels usage increased by 7.9%.^[1] Interestingly, Central Statistics Office industrial production volume indices for manufacturing industries indicate an increase of 18.4% for 2025 following a 5.5% decrease in 2024.^[12]

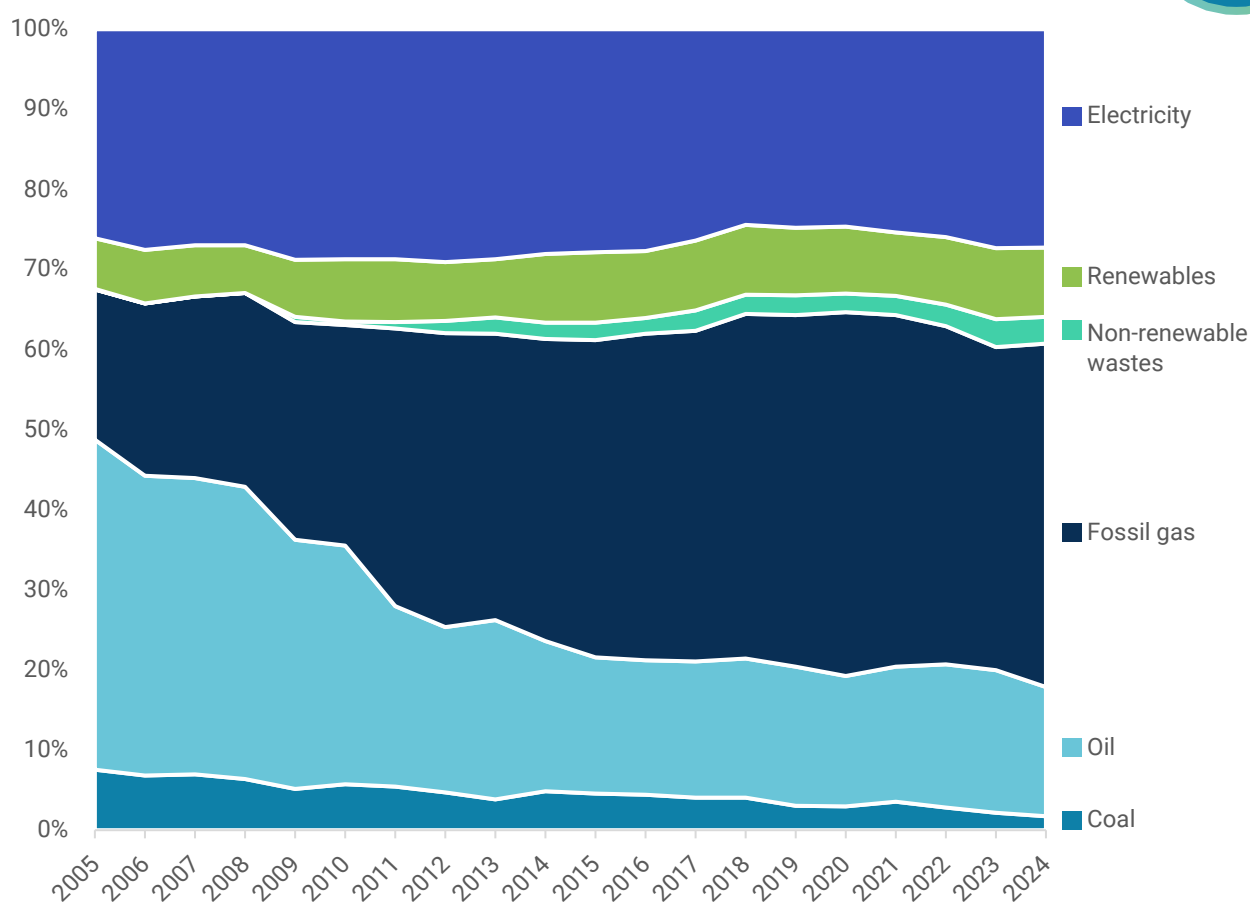


Figure 1: Percentage of total final consumption by each fuel type in the Industry sector, 2005–2024, showing fuel switching to fossil gas and the stagnation of both renewables and electricity across the time series, highlighting that current policy interventions are not sufficient for effective decarbonisation.

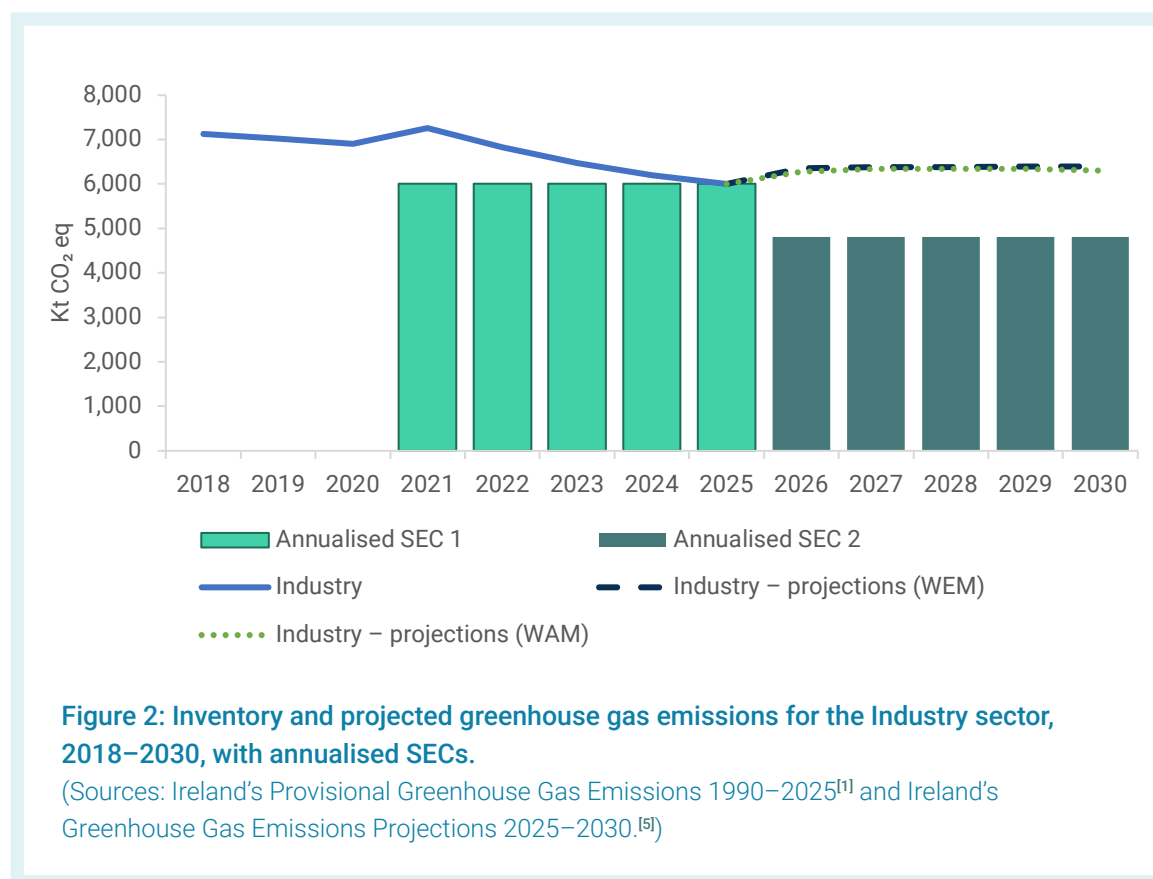
(Source: Total final energy consumption, SEAI.^[10])

In 2025, total emissions (from manufacturing combustion and industrial processes) from the cement sector decreased by 3.6% to 2.2 Mt CO₂ eq, with the sector's emissions now 44.6% higher than in 2011, during the economic recession. Industrial process emissions decreased by 1.8% in 2025, from 1.87 Mt CO₂ eq to 1.83 Mt CO₂ eq, following a 13.1% decrease in 2024 and a 6.1% decrease in 2023.^[1]

Despite recent reductions, the Industry sector is projected to significantly underperform in achieving its emissions reductions targets due to inadequate levels of electrification, technology uptake and fuel switching to renewables, coupled with forecasted growth in cement production.^[5] Against a target of a 20% reduction, emissions were only 15.9% lower in 2025 than in 2018 and, based on provisional data (Table 1), the sector has the largest percentage SEC exceedance of all Climate Action Plan sectors.^[1]



Additionally, the Industry sector is projected to be the second worst performing sector, after the Transport sector, against its 2026–2030 SEC. The sector's emissions reductions are projected to increase on 2025 emissions levels, amounting to only an 11.6% reduction on 2018 levels, compared with the target reduction of 35%. (Figure 2).^[5] The EPA's most recent set of projection scenarios shows almost no difference between with existing measures (WEM) and with additional measures (WAM) scenarios, demonstrating that there is an absence of clear additional Government measures to reduce future emissions, despite the sector being projected to drastically exceed its 2026–2030 SEC.



3.2. Other sector emissions (waste, F-gases and petroleum refining) and main trends

Emissions from the Waste sector accounted for 0.82 Mt CO₂ eq or 1.6% of total national emissions in 2025, a decrease of 0.4% from 2024 due to a 0.9% reduction in emissions of methane from landfill sites.^[1] Waste sector emissions are projected to decrease by 23.9% by 2030 from 2018 levels, driven almost entirely by a 34.5% reduction in landfill emissions.^[5]

There has been an overall emissions reduction of 17.1% in the sector since 2017,^[1] when Ireland's second waste-to-energy plant came into operation, leading to a reduction in emissions from landfill sites. However, the carbon emissions associated with the incineration of waste in such



plants are accounted for in the Electricity sector, with the latest EPA data indicating that 0.44 Mt CO₂ eq was emitted from waste incineration plants in 2024 alone.^a

Available statistics show continued waste generation at excessive volumes nationally and worsening or stagnating metrics for rates of recycling of packaging waste and waste sent to landfill. In 2024, Ireland generated 16.7 million tonnes of waste, equivalent to 8.5 kg per person per day, with Ireland's annual waste generation having increased by over 20% in the last decade.^[13,14] As a result of this increased consumption, Ireland is now certain to miss many mandatory recycling targets,^[15] including the EU municipal waste recycling target of 55% for 2025, as the national rate has remained stagnant at around 40%, with no significant change in 10 years.^[6]

Additionally, Ireland continues to rely on waste exports, with 37% of municipal waste being exported for final treatment and 351,000 tonnes of residual municipal waste being exported for energy recovery through incineration in 2024, highlighting a significant waste infrastructure gap in Ireland.^[6] It is extremely clear that Ireland's progress towards a circular economy is stalling and that a significant reduction in waste generation is required, supported in tandem by increased reuse and recycling.

The construction and demolition (C&D) waste stream is the largest in Ireland by both weight and volume, with 7.9 million tonnes of C&D waste being recorded in 2024 and 77% of C&D waste being soil and stone.^[16] C&D waste generation has grown considerably in recent years due to increased activity within the construction sector in Ireland, and is now 136% higher than it was a decade ago. In 2024, 73% of C&D waste treated in Ireland was recovered by backfilling (the process of filling excavations or pits with suitable material), which, while above the EU-required target of at least 70%, is a marked drop from 81% in 2022. Of the remaining 27% that was not recovered by backfilling in 2024, 16% was recycled, 10% went for disposal and 1% was used for energy recovery.^[16]

F-gases include a wide range of substances that are used in a diverse range of products and industrial processes, including refrigeration, air conditioning and semi-conductor manufacturing. The F-gas sector accounts for a small amount of Ireland's national emissions, at 1.2% in 2025. F-gas emissions increased by 5.4%, or 0.03 Mt CO₂ eq, in 2025 from 2024 levels, with the largest increase occurring in the semi-conductor industry.^[1] F-gas emissions are projected to decrease by approximately 56.4% by 2030 compared with 2018 levels, attributed to a reduction in the use of F-gas air-conditioning units in vehicles, despite a minor increase in F-gas emissions due to the roll-out of heat pumps across Ireland.^[5] Petroleum refining is the remaining activity within the Other sector, and this accounts for 0.6% of total national emissions and is projected to remain relatively stable out to 2030.^[1,5]

Figure 3 shows that emissions from the Other sector are projected to decrease by 36.5%, or 0.8 Mt CO₂ eq, by 2030 compared with 2018 levels, achieving both the sector's first and second carbon budgets. The sector has provisionally complied with its 2021–2025 SEC, emitting 97.6% of its budget, and is projected to use 92.3% of its 2026–2030 SEC budget.^[1,5]

a The EPA submits annual inventory information under the United Nations Framework Convention on Climate Change, including the National Inventory Document and Common Reporting Table data files. This value comes from Common Reporting Table 1.A(a)s4. Note that these data cover the fossil fuels portion of emissions only and do not include biogenic wastes, as biomass is not included in the total inventory reporting.

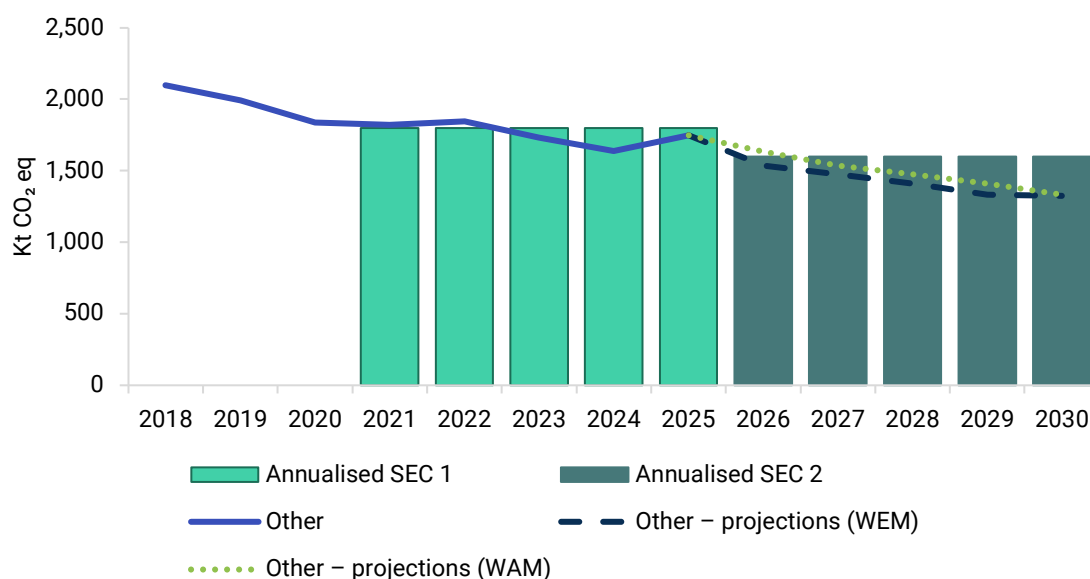


Figure 3: Inventory and projected greenhouse gas emissions for the Other sector (waste, F-gases and petroleum refining), 2018–2030, with annualised SECs.

(Sources: Ireland's Provisional Greenhouse Gas Emissions 1990–2025^[1] and Ireland's Greenhouse Gas Emissions Projections 2025–2030.^[5])

4. Progress on previous Council recommendations

4.1. Energy demand and transition

The Council has previously recommended a greater emphasis on energy efficiency for small and medium-sized enterprises (SMEs), assisted by knowledge sharing, research and supports.^[17] There has been some progress in this regard, with new and enhanced targeted grant schemes and evidence of uptake. The Business Energy Upgrades Scheme, launched in November 2024,^[18] supports a range of measures to improve energy efficiency and decarbonisation in the commercial sector and provides grant funding for technical assistance and capital investment in specific retrofit measures. In 2025, 186 grants were approved, with a combined estimated value of €3.36 million.^[19]

Also in 2025, the terms of the Local Enterprise Office Energy Efficiency Grant were changed, increasing available funding from €5,000 to €10,000, with matched funding of up to 75% of eligible costs.^[20] In 2025, 681 small business were approved for this grant, with an estimated combined value of €5.7 million.^[19] Research carried out on behalf of the Department of Enterprise, Tourism and Employment (DETE), published in February 2026, found that two in five SMEs surveyed (344) had taken steps in the previous 2 years to improve energy efficiency, such as insulating buildings or changing windows.^[19]

The Council previously recommended that new data centre connections be permitted only where the developer can guarantee that sufficient renewable capacity, in excess of the maximum electricity demand of the data centre, will be connected to the grid in advance of commissioning, and where heat export capability is provided at the initial construction stage to enable simple connection to



future district heating networks.^[21] Following the publication of the Commission for Regulation of Utilities' (CRU's) large energy users' connection policy^[22] and DETE's Large Energy User Action Plan (LEAP),^[23] large energy users, including new data centres, will be required to provide on-site or proximate generation and/or storage capacity to match their import capacity, of which only 80% must be new renewable capacity after 6 years.

The Council is extremely disappointed, as this requirement does not go far enough and is a policy decision that threatens Ireland's decarbonisation and climate targets, as discussed in further detail in the 2026 Electricity and Built Environment Annual Reviews, published in May and July 2026, respectively.

The recent period of sustained hot weather and the national hosepipe ban introduced by Uisce Éireann in summer 2026 have intensified scrutiny of water consumption by data centres. Data centres are not currently a significant contributor to overall demand on the public water supply network, accounting for less than 0.3% of the drinking water supplied by Uisce Éireann.^[24] However, data centres commonly utilise private wells,^[24] introducing localised water network pressures, particularly during periods of elevated temperatures.^[25] Therefore, transparency around water usage by data centres, along with other sectors that consume considerable volumes of water, most notably the pharmaceutical industry, is increasingly important given the growing pressures on Ireland's water network.

The Council has also called for legislation to mandate the supply of waste heat to district heating companies by industrial facilities whose total rated energy input is at least 1 MW. LEAP commits to advancing and supporting measures that promote the utilisation of waste heat from data centres in district heating networks. However, finalisation of the Heat Bill is urgently needed to provide a legislative framework to mandate the supply of waste heat. This need is reiterated by the Sustainable Energy Authority of Ireland's (SEAI's) recently published Comprehensive Heating and Cooling Assessment, which calls for decisive policy action, coordinated system planning and the implementation of a national heat strategy.^[26]

4.2. The circular economy and waste

The Council has made a number of previous recommendations in respect of the circular economy and to support improvements in Ireland's circularity rate. These include an increased focus on food waste and packaging waste segregation, including public education campaigns and economic incentives such as deposit return schemes. The deposit return scheme went live in February 2024. The scheme recorded 874 million returns in 2024 and over 1.4 billion in 2025.^[27] Since the introduction of the scheme, the overall recycling rate for in-scope containers has risen from 49% to an estimated rate of over 90%, exceeding the EU collection target of 77% by the end of 2025, with approximately 76% of containers captured directly through the scheme and the remaining amount collected via mixed dry recycling.^[27]

This demonstrates the potential and effectiveness of well-designed and well-communicated measures, with any additional revenue beyond what is needed to operate and improve the scheme being invested in closing Ireland's waste infrastructure gap (e.g. increased recycling capabilities).

The Council has also previously recommended the promotion of markets for the reuse of C&D waste as secondary raw materials in construction and engineering processes.^[17] Project Ireland 2040^[28] sets out the State's development ambition, with forecasted growth in housing and infrastructure projects; thus, construction is one of the sectors with the highest potential to increase circularity in the future via targeted measures for its expanding waste stream. The recently published Circular Economy Strategy 2026–2028 sets actions and targets for six priority sectors, including construction, with a commitment to publish a circularity roadmap for the construction sector in 2026 and to agree a



sectoral compact partnership between the Government and the construction industry by 2027 to accelerate circular practices.^[29]

The strategy will provide the basis for circular construction, considering all life-cycle phases. The focus will be on promoting a long service life, flexibility of use, modular construction, separability, reuse of components, ability to recycle the construction materials used, and use of the highest possible share of sustainable construction materials and recycled (secondary) materials. It also introduces a target of at least 10% recycled construction materials by weight procured by public bodies under new contract arrangements by 2028. These commitments are welcome; however, it is essential that implementation secures buy-in across the construction value chain and builds a longer-term pathway to increase recycled material use beyond the 2028 target.

The Council also recommended the introduction of mandatory resource and waste management plans (including pre-demolition audits) for all new buildings in order to reduce linear material consumption and to ensure the consistent application of guidelines within the construction sector.^[3] The second iteration of the Circular Economy Strategy (2026–2028) indicates that the EPA Best Practice Guidelines for the preparation of resource and waste management plans for C&D projects are currently being updated to reflect changing practices and updated policy and legislation.

The strategy aims to ensure that the updated guidelines are used at the development planning stage. However, no timeframe is provided for the publication of the updated EPA guidelines, and the strategy does not commit to making resource and waste management plans mandatory. The Council reiterates that mandatory plans are necessary to reduce linear material consumption and ensure consistent application across the construction sector.

4.3. Construction and cement

The Council has repeatedly recommended measures to reduce the emissions intensity of cement and concrete used in construction, for example by replacing clinker with lower-carbon cementitious materials. Industrial process emissions (such as the release of CO₂ from limestone during cement clinker production) are being examined by the Cement and Construction Sector Decarbonisation Working Group.

CAP25 included a number of actions that are being progressed by this working group, including detailed engagement with the cement sector through Enterprise Ireland, and monitoring research on innovation in the formulation and production of cement and concrete products. While CAP25 indicates that these actions address recommendations on prioritising sustainable alternative fuel use, they stop short of prescribing annual targets for alternative fuels in clinker production as previously recommended by the Council.

Public bodies are now obligated under the Public Sector Mandate to specify low-carbon cement and construction materials. From 1 September 2025, a whole-life-cycle greenhouse gas emissions assessment is required for all large public projects, in accordance with SEAI technical guidance and consistent with the Energy Performance of Buildings Directive (EPBD).

CAP25 included an action for the Cement and Construction Sector Decarbonisation Working Group to consider mechanisms to ensure that public bodies report compliance with new guidance to reduce embodied carbon in procured construction projects. The Council is disappointed that no timeframe was stipulated for this action and that no updates were reported in the CAP25 Q4 progress report.^[30] Monitoring compliance will be critical for ensuring that a reduction in carbon emissions from publicly procured construction projects is achieved.



The Council has also recommended accelerated implementation of the EPBD requirement to ensure that life-cycle global warming potential (GWP) is calculated and disclosed for buildings of less than 1,000 m², to reduce the demand for high-clinker-content cement and incentivise the procurement of low-carbon cement in private sector construction. This will become an EU regulatory requirement for all new buildings by 2030 under the EPBD, and by January 2028 for new buildings with a useful floor area larger than 1000 m².^[31]

SEAI has now published a life-cycle GWP calculation workbook for buildings following a public consultation in 2025.^[32] The Irish Green Building Council has tested this on 46 real building projects and 6 renovation projects, setting the first benchmarks for the carbon footprint of new and refurbished buildings in Ireland.^[33] By January 2027, Ireland must notify the European Commission of a roadmap detailing the introduction of limit values on the total cumulative life-cycle GWP potential of all new buildings and setting targets for new buildings from 2030. The Council welcomes this progress but reiterates its recommendation to accelerate the application of life-cycle GWP assessment to buildings of less than 1,000 m².

4.4. Adaptation and resilience

The Council has previously recommended that DETE provide sufficient support for businesses to integrate adaptation into their operations, including for the development of products, innovations and services that enhance resilience to climate change. The Government's Action Plan on Competitiveness and Productivity,^[34] published in September 2025, includes an action for DETE to review supports and funding available to businesses for climate adaptation measures in 2025 and 2026. The plan acknowledges that climate adaptation and mitigation need to be aligned and coordinated if the variety of challenges posed by climate change are to be addressed.

Within DETE, additional resources have been assigned to undertake an Irish Government Economic and Evaluation Service research project engaging with a range of stakeholders to assess how existing supports can better help businesses to adapt to climate change (personal communication, July 2026). However, the wider support landscape remains primarily focused on mitigation, and the Council urges DETE to complete its review of adaptation supports for businesses and enhance its messaging on industry and business adaptation without delay, and to ensure the provision of sufficient and accessible supports to enhance the resilience of businesses to ever increasing climate change impacts.

NewERA's 2025 update report on the implementation of the Climate Action Framework^[35] highlights progress in climate adaptation across the commercial State sector. According to the report, 19 of the 26 commercial State bodies (CSBs) had assessed their exposure to climate hazards, 18 had identified specific vulnerabilities to climate risks, and 8 were preparing adaptation plans. However, only ten CSBs reported having climate adaptation objectives in place, and just four had a board-approved adaptation plan. This represents an increase from Q1 2024, when only one CSB reported having a board-approved adaptation plan.

While this progress is welcome, the pace of uptake remains too slow. All CSBs should be expected to develop and implement adaptation plans in the short term, and the four organisations with board-approved plans should serve as exemplars for the wider sector.



5. Analysis and discussion

5.1. Industrial heat decarbonisation

5.1.1. Biomethane and the Renewable Heat Obligation

The role of biomethane in high-temperature industrial processes that are not easily electrified (e.g. cement production) has previously been highlighted by the Council.^[36,17] The recent SEAI Heating and Cooling Assessment^[37] confirms that biomethane is expected to play a targeted role in decarbonising the heat sector, particularly highlighting its application in high-temperature industrial applications where electrification is currently not viable. SEAI notes the critical need for clear policy signals, investment and supply chain development in developing an indigenous bioenergy industry.

It is imperative that the Irish biomethane sector is developed at scale and supported adequately to decarbonise high-temperature industrial processes utilising Ireland's indigenous bioeconomy resources and to reduce further dependency on fossil fuels. In recent years, Ireland has remained vulnerable to global energy price shocks, highlighting its dependence on imported fossil fuels and the resulting societal and economic impacts of volatile energy markets, risks that a resilient biomethane sector can help mitigate.

Ireland's National Biomethane Strategy was published in May 2024^[38] with the commitment by the Government to support the biomethane industry and achieve the ambitious Climate Action Plan target of 5.7 TWh of indigenously generated biomethane by 2030. As highlighted in both the Electricity^[39] and Agriculture, Land Use, Land Use Change and Forestry^[40] 2026 Annual Reviews, the Council is extremely concerned that, without immediate and sustained action, biomethane targets will be impossible to meet, affecting cross-sectoral carbon emission reductions, energy security and diversification of farm activity.

Most strikingly, the EPA has recently revised its most ambitious emissions projections scenario (WAM) to model the use of only 1.75 TWh of biomethane across the heat sector by 2030, down from 4.3 TWh, reflecting the piecemeal implementation of the National Biomethane Strategy and the lack of a clear economic case for biomethane production to date due to insufficient support.

The 2024 Biomethane Capital Grant Scheme operated by the Department of Agriculture, Food and the Marine and SEAI committed €40 million to providing capital investment for new anaerobic digestion plants, with stipulations of a maximum grant of up to €5 million per project, covering 20% of total capital investment, and with projects to be completed before 2026. In June 2025, it was reported that 18 projects had received offers for capital grants via the scheme; however, the sector cast significant doubt on its ability to meet the strict construction completion deadline.^[41]

By July 2026, it was confirmed that only seven projects had been ultimately approved for funding of €19 million,^[42] drawing down less than half of the committed funding pool due to significant issues, which included most notably restrictive grant eligibility criteria, the difficult-to-meet construction completion deadline and, critically, delays in the finalisation of the Renewable Heat Obligation (RHO).

The RHO was designed to support the development of domestic biomethane by creating an obligation-based scheme that would require providers of fossil fuels to ensure that a proportion of the energy they supply (1.5% in 2026 and rising to 3% in 2027) would come from renewable sources (e.g. biomethane).^[43] Due to a mature anaerobic digestion sector in Europe, which can offer biomethane at a lower cost than Ireland's newly established producers, a domestic product multiplier of 1.5 was proposed for energy suppliers acquiring Irish biomethane to improve its competitiveness



relative to European imports. This measure aimed to provide financial certainty and increased bankability for anaerobic digester projects in Ireland.

However, after notification of the intention to use the multiplier by the Irish Government in December 2025, the European Commission found in March 2026 that this 1.5 product multiplier was non-compliant with the EU's single market rules.^[44] Thus, RHO finalisation has been delayed, increasing uncertainty for investment, and ultimately further negatively impacting a sector that the Government is reliant upon for its own decarbonisation targets.

Additionally, while funding of up to €200 million for a second round of a capital grant support scheme, to be operated by the Department of Climate, Energy and the Environment (DCEE) from 2026–2030, has been secured through the Infrastructure, Nature and Climate Fund process,^[45] it is imperative that learnings from the failures of the first scheme (e.g. difficult-to-meet eligibility criteria, overly tight delivery timelines and lack of timely policy support signals) are carried forward into the execution of the second.

The Council has repeatedly and with ever growing urgency stressed the importance of developing an indigenous biomethane supply for decarbonisation. RHO scheme finalisation is urgently required to kick-start the biomethane sector following the European Commission's ruling that Ireland's attempted implementation was unlawful. The Government must learn from the failings of the first capital grant scheme to improve the second phase of market supports from 2026 to 2030, and in doing so launch a parallel indigenous biomethane generation support scheme that is bankable and EU compliant, rather than trying to force all support through the RHO to accelerate Irish biomethane production.

5.1.2. Grid connections

The Industry sector emits around 4.6 Mt CO₂ eq from heating processes every year, accounting for 22 TWh or 81% of total industrial energy demand per annum.^[46] DETE's Roadmap for the Decarbonisation of Industrial Heat^[47] and SEAI's National Heat Study^[48] state that electrification is critical to industrial decarbonisation, noting industrial heat pumps as a key alternative for low- and medium-temperature heat applications (up to approximately 150°C, representing 40% or 7 TWh of Irish industrial heat demand). Through its Roadmap for the Decarbonisation of Industrial Heat, the Government has committed to a target of a 70–75% share of carbon-neutral heating in total industrial fuel demand by 2030.

However, despite this commitment, and as noted in *Section 3.1*, industrial electrification has stalled rather than accelerated in recent years. This is due to both lengthy grid connection timelines^[49] and the cost differential between electricity and fossil fuels (the 'spark gap').^[50] As a result, progress in decarbonising industrial heat is increasingly constrained by grid infrastructure, with network development failing to keep pace with industry demand.

CRU's Price Review 6 final determination, published in December 2025, approved up to €18.9 billion for electricity grid investment,^[51] while the Critical Infrastructure Bill, published in April 2026, creates a new fast-track approval process for strategic infrastructure.^[52] This follows the publication of the Accelerating Infrastructure Report and Action Plan in December 2025, which set out 30 time-bound measures to remove infrastructure barriers and reduce delivery timelines.^[53] These include streamlining legislation underpinning regulatory processes, including enabling consenting to electricity distribution infrastructure at the local authority level by Q2 2026, which is currently being progressed.

Additionally, LEAP commits CRU, Eirgrid and ESB Networks to designing flexible or non-firm contracts and hybrid connections for large energy users by 2027.^[23] This will include consideration



of opportunities for cost-effective connections in respect of existing grid infrastructure and new infrastructure to be delivered under Price Review 6 or possible alternative grid development frameworks.

While these measures are welcome, it is evident that significant delays and the high costs associated with industrial grid connections continue to impede the deployment of electrified heat technologies and to slow progress towards the Government's industrial decarbonisation targets (see *Section 3.1*). Addressing these barriers will be essential if the sector is to achieve the scale of electrification required under the Roadmap for the Decarbonisation of Industrial Heat. Therefore, the Council reiterates its previous recommendation^[3] that the CRU and ESB Networks reduce electricity grid connection costs, timescales and challenges related to switching from unabated fossil fuel use for low- to medium-temperature industrial heat decarbonisation.

5.2. Low-carbon cement and concrete

Cement manufacturing is Ireland's single biggest industrial emitter, accounting for 2.2 Mt CO₂ eq or approximately 37% of total industrial emissions in 2025.^[1] The cement manufacturing industry in Ireland consists of three companies operating four factories, while the wider concrete industry includes over 500 active quarries and 200 concrete manufacturing plants. Cement accounts for around 90% of concrete's carbon footprint, so decarbonising the cement industry is critical for decarbonising the concrete industry.

Substituting clinker with supplementary, low-carbon cementitious materials, alongside carbon capture, utilisation and storage (see *Section 5.3*), is an effective cement decarbonisation strategy. The first measure is favourable in an Irish context, as Ireland's clinker-to-cement ratio of 85% is significantly higher than the EU and global averages of 76% and 71%, respectively, and must be lowered.^[54,55] In accordance with DETE's report on reducing embodied carbon in cement and concrete via public procurement,^[56] public bodies are now mandated to procure concrete with a minimum of 30% clinker replacement.

However, uptake of low-carbon cement and concrete in the private sector is also essential for the widespread sectoral emissions reductions that are required to correct the Industry sector's projected overshoot of emissions (see *Section 3.1*), and any barriers inhibiting innovation and market acceptance must be removed.

As the standards body responsible for determining which low-carbon solutions for cement and concrete are certified, the National Standards Authority of Ireland (NSAI) plays a key role in the sector's decarbonisation. Its ability to grant 'recognition of suitability' for these materials is a vital step in achieving market acceptance through amendments to the relevant national annexes and standards.

Paradoxically, at the very time that the NSAI's Concrete Committee should be accelerating activity, it is acting as a bottleneck, with a growing backlog of proposed low-clinker solutions.^[57] This is due to the committee's failure to apply its existing framework, such that innovative low-carbon solutions submitted to the body are simply not brought forward for decision as opposed to them being rejected on stated grounds. As a result, a backlog of proposed low-clinker solutions has developed, with proposals sitting without approval or rejection for several years.

This is best represented by a proposed solution submitted to the committee by Ecocem and REPAK in 2022, which utilised co-grinding of recycled container glass and industry-standard granulated blast furnace slag as a circular economy and low-carbon addition in concrete. Although an expert technical committee submitted its report in 2023 in support of recognition of suitability of the



proposal, it had still not been tabled for the proposed amendments to the national annex for decision by the Concrete Committee in 2026.^[57]

Additionally, the activity of the body is difficult to track, with no new annual activity report published publicly since 2022.^[58] While a new framework will undoubtedly be essential if revolutionary formulations are developed for novel binders in concrete, the proposals awaiting decision at present are evolutionary and of low technical risk.^[57] These decisions should be progressed without delay using the existing NSAI Concrete Committee framework to engineer the low-carbon solutions that are urgently required.

The Council reiterates its previous recommendation that the NSAI's Concrete Committee urgently develop new standards and accelerate the decision-making process for low-carbon cement technologies. There has been an unacceptable growing backlog and overall stalling of progress with regard to innovative solutions at the NSAI at the very time that it should be accelerating decision-making. This has directly affected decarbonisation of the cement and concrete industry during a critical period for meeting sectoral emissions targets, which are currently projected to be significantly exceeded for the 2026–2030 SEC (see *Section 3.1*).

5.3. Carbon capture, utilisation and storage

While carbon capture, utilisation and storage (CCUS; when combined with bioenergy sources, BECCS) is increasingly recognised as a climate solution, it is imperative that the focus remains on direct emissions reduction measures, such as reduced fossil fuel consumption, increased renewable generation capacity with electrification, and energy efficiency gains, all of which are proven cost-effective solutions. However, specific industrial processes such as cement and lime production generate significant emissions that cannot be eliminated through the aforementioned solutions alone, with CCUS widely regarded as one of the few technically viable pathways to achieving near-zero emissions within these hard-to-abate sectors.

The European Commission has identified the need to considerably scale up and invest in clean energy infrastructure and technologies, such as CO₂ infrastructure and storage, with the EU's Industrial Carbon Management Strategy recognising the need for a legislative initiative with a view to developing competitive markets and transport infrastructure for CO₂.^[59] Under the Net-Zero Industry Act, there is a mandated EU target to achieve a CO₂ injection capacity of at least 50 million tonnes per year by 2030 supplied by European oil and gas producers, showing increasing momentum in CCUS policy development at the EU level.

Additionally, BECCS installation in cement manufacturing is expected to be deployed from 2030 to decarbonise emissions from this process as part of the modelling that informed the Council's proposal for the second programme for carbon budgets.^[60] This is an important assumption, as the National Energy Modelling Framework, based on current planned policy, does not assume adoption of BECCS. As highlighted in previous Annual Reviews, this points to the need to develop appropriate policy support for BECCS/CCUS as part of a broader range of measures required in the Industry sector. In addition, supporting decarbonisation of the Industry sector would have important co-benefits in lowering the carbon intensity of production and achieving compliance under the EU Emissions Trading Scheme.

Successive delays within Ireland's CCUS policy development in recent years mean it has not matched the ambition developing across Europe. There must be a shift in action to ensure CCUS is adequately supported in a timely manner via the correct planning and policy signals. The CCUS Task Force, established in 2024 under the joint leadership of DECC and DETE, is developing a work plan to



report on the market readiness of this activity and to progress the development of policy and a regulatory framework in the Irish context.

CAP24 included an action (IN/24/3) for the development of a CCUS strategy to provide a clear policy framework to guide long-term investment decisions. This was due for publication in Q1 2025 but was not published. This action now falls under CAP25 IN/25/3, which was due for publication in Q4 2025; however, nothing has been published to date. As of the latest Climate Action Plan progress report, a CCUS vision statement is currently in development, which is planned to be published by Q4 2026,^[61] disappointingly more than 18 months after the original strategy publication deadline.

Ireland has not yet transposed the EU Carbon Capture and Storage Directive (Directive 2009/31/EC) to allow geological storage, it has not ratified the amendment to the London Protocol that would allow international transport of CO₂ for offshore storage, and it has not submitted a provisional application to the International Maritime Organization to form future relevant bilateral agreements. These restrictions effectively block both domestic carbon capture and storage projects and the export of captured CO₂ to storage sites in other countries like Norway or the Netherlands, where commercial operations are already under way.

DCEE and DETE should publish their overdue CCUS reports and vision statement immediately, and expedite the transposition of any outstanding legislation or international commitments to align with EU requirements and enable commercial carbon capture, transport and storage. The Government must establish a comprehensive enabling policy framework for CCUS, covering CO₂ transport, temporary storage, shipping and cross-border storage agreements, with a particular focus on applications in cement and lime production.

5.4. The circular economy and timber in construction

5.4.1. The circular economy

Circularity is essential for a sustainable and resilient economy, with various government strategies and commissioned reports highlighting its importance and capabilities in reducing carbon emissions, enhancing resource efficiency and creating new markets for services and goods (e.g. The Circularity Gap,^[62] the Joint Oireachtas Committee on Environment & Climate Action report on the circular economy^[63] and the Whole of Government Circular Economy Strategy 2026–2028^[29]). There is significant potential for circularity-focused enterprises in sectors like construction, food and drink, biopharmaceuticals, chemicals and technology.

Despite this, Ireland's economy is predominantly linear, lacking circular supply chains, sufficient financial supports and infrastructure, and is reliant on other countries for material management. This is best highlighted by Ireland's circular material use rate, which is the ratio of the total amount of material a country recycles to the total amount of material a country consumes. In Ireland, this rate has consistently remained far below the EU-27 average of 12.2% and has been the lowest in western Europe since 2012, at just 2%.^[8] It is imperative that Ireland kick-starts its circular economy, which it has to date failed to do, through accelerated action to match its climate ambition.

The second iteration of the Whole of Government Circular Economy Strategy was published in February 2026.^[29] One of its core objectives is to increase Ireland's circular material use rate by two percentage points each year, rising to 12% by 2030. The Council welcomes this level of ambition but is concerned that the actions of the strategy do not identify lead bodies, supporting organisations or timelines for completion, emphasising that clear governance and timely implementation of the strategy in full will be essential in order to reach the 2030 target.



The EPA has consistently highlighted that Ireland's waste generation is too high and that the country needs to make measurable progress on stalled recycling rates and reduce overall consumption.^[15] Investment in waste infrastructure is needed to reduce Ireland's reliance on exporting waste to overseas facilities. Opportunities to reduce, reuse and recycle valuable materials and resources are also being missed. Packaging waste generation is excessive, and the rate of waste generation is increasing more than Ireland is increasing its recycling capacity.

The EU Circular Economy Act, which Ireland has responsibility for advancing during its presidency of the Council of the EU, is a major legislative initiative developed by the Commission that is designed to transition Europe from a linear 'take–make–waste' model to an increasingly closed-loop system, which is crucial to building a more resilient and competitive Europe. The principal aims of the act are to create a single market for secondary raw materials, double the EU circularity rate, standardise waste regulations and, overall, boost an internal supply chain.

The Government should explicitly position itself to provide leadership on the circular economy at the EU level, including during its presidency, in advance of the forthcoming Circular Economy Act. This also provides an opportunity for the Government to drive decisive domestic action via the DCEE accelerating actions published in the Circular Economy Strategy 2026–2028. These must include the publication of a circularity roadmap for the construction sector by Q4 2026 and the transposition of the Waste Framework Directive to ensure compliance with the EU deadline of June 2027.

The revision of the Waste Framework Directive set new provisions on food waste and textiles, including binding food waste reduction targets of 10% in processing and manufacturing and 30% per capita in retail and consumption, to be achieved at the national level by 2030.^[64] The National Food Waste Prevention Roadmap, to be prepared on a statutory basis in 2026,^[29] will be critical in setting out the pathway to achieving these targets.

The Council reiterates its concern that Ireland's continuing failure to deliver on the circular economy, including its own Circular Economy Strategy, will maintain the country's position as one of the poorest performers in terms of circularity in Europe, with the Council noting that increased political support for the circular economy is required to implement current actions and move beyond a linear, business-as-usual approach to consumption in Ireland.

Box 1. Good practice examples in circular construction

Cork County Council^[65]

Cork County Council has embedded the EPA's resource and waste management planning guidelines^[66] into its planning processes by requiring C&D projects to prepare waste management plans and segregate materials for reuse, recycling or appropriate disposal. This demonstrates how planning authorities can support the consistent application of circular economy principles, reduce C&D waste and maximise resource recovery at the project level, with wider adoption of this practice called for by the Council at the national level.

Limerick's Opera Square^[67]

The Limerick Opera Square project commenced with Ireland's first pre-demolition audit, which identified materials suitable for reuse before demolition began. The audit enabled the recovery of over 1,000 tonnes of stone and brick that would otherwise have been sent



to landfill, with these materials repurposed for heritage, regeneration and community projects across the city and county. The initiative also facilitated the reuse of other materials, including timber, glass, fencing and architectural features, resulting in significant waste reduction and resource efficiency benefits, which can be achieved through early planning and material recovery.

Adare Bypass^[68]

The Foynes to Limerick Road Scheme, including the Adare Bypass, has illustrated how innovative repurposing of suitable material from C&D waste streams can be done effectively in Ireland. Following the by-product regulations in the Waste Framework Directive, over 200,000 m³ of material from 12 different infrastructure projects was diverted from waste between January 2025 and February 2026, reducing material use and environmental impacts, strengthening circularity within the local construction supply chain, and contributing to the national waste management plan target to reduce C&D waste by 12% by 2030. These innovations must be carried forward into large-scale public transport infrastructure developments in the coming years.

5.4.2. Timber in construction

Historically, construction in Ireland has relied heavily on concrete and cement products, with a lower proportion of timber constructions. While uptake within the construction sector is increasing, with the Timber Frame Manufacturers' Association reporting that 72% of large-scale scheme housing used timber frame construction in 2025, up from 48% in 2023,^[69] there remains considerable scope to further increase its use. In Scotland, for example, timber frame construction is used in more than 90% of scheme houses.^[70]

There is an opportunity to simultaneously support Ireland's expanding forestry sector and address the need for sustainable, efficient construction that delivers for the public in terms of housing supply, skilled labour and climate ambition. The Council reiterates that it is pivotal that the Government supports indigenous timber production, research and innovation to capture domestic supply in Irish construction as it competes with robust export markets,^[71] and provides financial supports for the sector, which has experienced fragmented and piecemeal policy signals to date.

The Timber in Construction Steering Group was created to identify the necessary conditions to accelerate timber use in Irish construction. The group has published a number of reports identifying the barriers that have limited the usage of timber in Irish construction, examining regulatory and standardisation challenges, as well as how to capture Irish timber while ensuring the highest degree of building safety and property protection. These reports include the Market Opportunities for Timber in Construction in Ireland report in October 2025^[70] and a final synthesis report in June 2026.^[72]

To drive timber innovation, investment and adoption to capture domestic supply, the Council is calling for the full implementation of the Timber in Construction Steering Group's recommendations to provide long overdue support for the sector. In particular, to enable long-term strategic planning and innovation, and to avoid further fragmentation in the approach to supporting the sector, the Government should establish a wood knowledge development and innovation facility, which would serve as a permanent platform for strategic coordination among critical stakeholders, including industry, researchers and government bodies. This should be complemented by a national,



permanent industry forum to address technical and commercial barriers that currently limit Irish timber use in higher-value construction products.

Such a facility and permanent industry forum could act as a focal point for policy, product development, training, and national data collection on timber volumes and quality, ultimately involving stakeholders across the wider timber ecosystem to inform long-term strategic decision-making within the sector to support its much-needed development. For example, such a forum could give consideration to changes in the species composition of forest estates and the diversity of saw log sizes that could result from changes in forest management to a continuous cover forestry system.

Increasing domestic demand for timber could help create the long-term market confidence necessary to support afforestation which, as highlighted in the Council's Agriculture and Land Use, Land Use Change and Forestry Review, is significantly off track, with the Government's target of planting 8,000 ha of forest annually up to 2030 to be missed by a very substantial margin.^[40] The Council's recommendation that the next Forestry Programme, due in 2028, set specific targets across the various schemes and introduce policy flexibilities to support increased participation among farmers and landowners should be complemented by actions that strengthen the demand for sustainably produced Irish timber suitable for use in construction.

5.5. Climate resilience

5.5.1. Resilience supports for SMEs

As outlined in *Section 4.4*, the Government has made some progress in developing resources and supports to help businesses integrate climate adaptation into their operations. In June 2026, the Skillnet Climate Ready Academy launched a new climate risk and resilience programme to help businesses assess, manage and respond to growing climate-related risks affecting operations, supply chains, infrastructure and long-term competitiveness.^[73] In addition, one of the proposed outputs of DETE's Irish Government Economic and Evaluation Service research project is the development of a climate adaptation checklist for businesses, to be integrated into the existing Climate Toolkit 4 Business, alongside the use of Irish case studies to showcase best practice (personal communication, July 2026).

While the Council welcomes this progress, the broader landscape of business assistance remains primarily focused on reducing greenhouse gas emissions, with comparatively limited dedicated support to help businesses proactively assess climate risks and invest in resilience to help manage current and future climate impacts.

Evidence suggests that awareness of climate adaptation remains very low among many businesses, particularly SMEs, which often prioritise actions that deliver immediate cost savings or operational efficiencies.^[74] At the same time, businesses are increasingly exposed to risks associated with flooding, water scarcity, overheating, supply chain disruption and extreme weather events. This growing exposure is reflected in research commissioned by DETE, which found that more than one-quarter of Irish SMEs (27%) reported that climate change was already affecting their business operations in 2024.^[75]

Several opportunities exist to incentivise and support Irish business in this area, including technologies for more climate-resilient agriculture, the deployment of nature-based measures to protect biodiversity, measures to protect business properties from flooding and extreme weather events, indoor thermal regulation, digital-based services such as early warning systems, practical



guidance and sector-specific risk assessments tools, and systems for monitoring environmental conditions.

The Council recommends that DETE, Enterprise Ireland, SEAI, the Strategic Banking Corporation of Ireland, IBEC and Uisce Éireann review and expand their grant and low-cost loan programmes to explicitly support SMEs in climate change adaptation, providing access to guidance, tools and financial supports to help them assess risks and implement effective adaptation measures. Specific supports to SMEs in adopting water-efficient technologies should be developed to reduce demand and emissions relating to water treatment and heating. This would include low- to moderate-cost water-saving technologies such as efficient taps, showers and toilets, while the use of flow regulators and smart meters could aid water use efficiency through flow control, leakage detection and user behaviour insights.^[76]

Box 2. Case study: SMEs Resilience Checklist in the Adaptation Scotland programme

The Adaptation Scotland programme, funded by the Scottish Government, provides a dedicated suite of resources to support businesses in climate adaptation, including an online tool to explore future extreme weather risks and case studies demonstrating practical adaptation actions.

One particularly useful resource is the SMEs Resilience Checklist, which helps SMEs identify climate risks and take practical steps to improve their resilience.^[77] The tool encourages businesses to undertake practical actions such as installing flood resilience defences, developing emergency evacuation plans, introducing health and safety protocols to protect workers during extreme weather, reviewing insurance coverage and assessing supply chain vulnerabilities. The checklist provides a good example of how a simple, accessible tool can support SMEs in understanding risks, identifying appropriate adaptation actions and embedding resilience into business planning.

5.5.2. Transboundary climate risks

Ireland's economy is highly exposed to transboundary climate risks (TCRs), reflecting its dependence on international trade, imported goods, global supply chains and interconnected infrastructure systems. TCRs cross national borders and are associated with the impacts of climate change that (1) propagate through different pathways to affect other countries and regions and (2) emerge from the effects of climate change adaptation in one or more countries and can have repercussions for others.^[78]

Previous research commissioned by the Council identified significant TCRs for Ireland relating to food security, international trade, energy security, ecosystem services, water resources and human health.^[79] Similarly, the National Climate Change Risk Assessment (NCCRA) notes that extreme weather events and longer-term climate impacts overseas can affect the availability and cost of imported goods, disrupt global logistics and supply chains, increase financial risks and place additional pressures on vulnerable households and businesses.^[80] The seven recognised pathways through which TCRs can impact Ireland are presented in Box 3.



Box 3. TCR pathways

The EPA-funded research project Transboundary Climate Risks for the Island of Ireland^[78] identified seven pathways through which TCRs can affect Ireland:

1. Trade risk pathway: this relates to the exchange of goods and services across borders, impacting agriculture, food security and other commodities.
2. Biophysical risk pathway: this encompasses climate impacts on biodiversity, ecosystems and natural resources, including fisheries and forestry, and the spread of invasive species.
3. People risk pathway: this involves changes in the movement of people in response to climate change.
4. Geopolitical risk pathway: this encompasses international competition for natural resources, markets and trade routes, potentially leading to new political challenges.
5. Psychological risk pathway: this involves the psychological impacts of climate change on people's well-being.
6. Finance risk pathway: this encompasses changing capital flows in response to climate change impacts, with implications for businesses engaged in international trade, finance and insurance.
7. Infrastructure risk pathway: this relates to the physical infrastructure connecting countries, such as energy, transport, water and communications networks.

TCRs remain underassessed and policies for addressing them underdeveloped, both in Ireland and internationally.^[78] As noted in the Council's letter on the draft sectoral adaptation plans, TCRs were not adequately reflected in the plans published in November 2025.^[81] In addition, the NCCRA recognises the need for further assessment and improved understanding of TCRs in Ireland and recommends expanding analysis of these risks within future climate risk assessments.^[80]

The Council recommends that the Government initiate a structured dialogue with industry associations, business representative bodies and key infrastructure providers to exchange views and consider how these TCRs can be better managed. The recently established Climate Adaptation Taskforce provides an opportunity for a more coordinated and holistic approach to managing TCRs.^[82] Given the significant role of businesses in global supply chains, trade and finance, the private sector must be actively involved in identifying, assessing and managing TCRs, with risk ownership and response measures shared across the public and private sectors.

A comprehensive, economy-wide assessment should be commissioned to quantify the potential economic costs of TCRs to Ireland, including impacts on supply chains, trade flows, critical infrastructure, food systems and financial stability. Such an assessment should identify vulnerable sectors, evaluate existing levels of preparedness and inform risk management priorities across the public and private sectors. The findings should also support the integration of TCRs into future climate risk assessments, national adaptation policy and sectoral adaptation planning. Three illustrative examples of TCRs affecting Ireland are provided in Box 4.

**Box 4. Examples of TCRs affecting Ireland****Example 1. Trade risk pathway: heatwaves impacting food production and prices in 2026**

Extreme heat and wildfires across Europe during summer 2026 reduced agricultural production in a number of countries,^[83] affecting the availability and price of food products traded internationally, with grain harvest losses estimated at nine million tonnes and associated revenue losses of around €2 billion.^[84]

Approximately 83% of the fruit and vegetables consumed in Ireland are imported,^[85] making the country particularly exposed to climate-related disruptions in major food-producing regions. These impacts may be realised through food price inflation and, where supply constraints become severe, temporary shortages of particular food products.^[86]

Example 2. Biophysical risk pathway: Asian hornet identification, an invasive species threat to Ireland's pollinators, in 2025

The Asian hornet, which is an invasive species, is a highly effective predator of honeybees, wasps and other important pollinators, such as hoverflies. Originally from Asia, the insect was accidentally introduced to France in 2004, where it spread rapidly into neighbouring countries. In 2025, Ireland recorded 36 verified sightings of Asian hornets across two counties, and two nests were located and removed in Cork.^[87] Further verified sightings were reported in October 2026 in County Cork, leading to an intensive surveillance and monitoring operation to locate and remove a nest.^[88]

As the Council noted in last year's Biodiversity Annual Review, Asian hornets are a sign of accelerating risks to Ireland's environment. The NCCRA identifies the increase in occurrence of invasive species due to changes in climatic conditions as a substantial risk by 2050 and a critical risk by 2100. Warmer temperatures and milder winters can create more favourable conditions for invasive species, enabling them to thrive and disrupt local ecosystems, and outcompete native flora and fauna in terrestrial ecosystems.

Example 3. Infrastructure risk pathway: Storm Darragh impacts on Holyhead in 2024

Damage to ferry berths at Holyhead Port caused by Storm Darragh in December 2024 resulted in the closure of a key maritime gateway linking Ireland with Great Britain. The disruption affected freight and passenger services for several months and highlighted Ireland's dependence on transport infrastructure located outside its jurisdiction. As an island nation that relies heavily on maritime trade, climate-related impacts on ports and transport networks in neighbouring countries can have significant consequences for Irish supply chains, economic activity and connectivity.

Analysis has shown that 86% of global ports are exposed to multiple natural hazards, and that approximately 40% of them are exposed to extreme maritime conditions that could disrupt their operational capabilities.^[89] The Council has previously reiterated the urgency of finalising the National Ports Policy to ensure that all ports take a harmonised approach to the integration of climate risks, including cross-border and transboundary impacts.^[90]



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