KPMG

# Ireland's Climate Action Plan 2024

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#TalkToAction

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# Contents

# Executive Summary

Climate Action Plan 2024 (CAP24) is the third publication since the introduction of the Climate Action and Low Carbon Development (Amendment) Act 2021. CAP24 addresses the critical challenges and measures to be incorporated to achieve the legally binding target of reducing emissions by 51% (from a 2018 baseline) by 2030.

While progress has been made across sectors, the current pace of progress in reducing Ireland's GHG emissions is likely to be insufficient in meeting 2030 net zero targets. This is despite taking account of significant actions already underway and future actions planned across key sectors including agriculture, transport, electricity and the built environment.

CAP24 calls for further accelerated action to support Ireland in closing the gap between ambition and action, achieving 2030 targets to proactively mitigate the worst effects of climate change, build Ireland's climate resilience, ensure Ireland's energy and food security, while also maintaining Ireland's economic competitiveness.

In this third guide to Ireland's Climate Actions plan, KPMG summarises key actions outlined in CAP24 across ten key sectors and provides our perspective on the scale of the challenge in achieving our 2030 targets.

**Patrick Farrell**
Partner
Head of ESG Consulting

**CAP24 makes it clear that further progress and action is required if we hope to achieve our 2030 targets. Closing this gap will require significant investment in the order of €119-125 billion across energy efficiency, future energy systems, food and agriculture, carbon capture and storage, and carbon removals.**

**Russell Smyth**
Partner
Head of KPMG Sustainable Futures

**Despite progress against our targets, Ireland is currently on track to only achieve a 29% reduction in GHG emissions by 2030 rather than 51%. This challenge will only become more pressing as our annual emission reduction requirements will only increase, driving a need for more urgent action.**

# 02.
# Highlights by Sector

# Sector Summaries

The Government has set a legally-binding target to achieve net-zero emissions by no later than 2050, and a 51% reduction in GHG emissions by 2030. Currently, Ireland is not on track to meet its 2030 emissions reduction targets, with most sectors anticipated to miss both 2025 and 2030 targets. This cumulatively means that by 2030, Ireland's anticipated emissions reduction may only equate to an estimated 29% reduction on 2018 levels according to EPA modelling, taking into account all measures outlined within the Climate Action Plan. When taking account of unmodelled measures and unallocated savings which would potentially see emissions reduce by 42% by 2030, this still leaves a significant 9% gap between ambition and action which will need to be met.

| Total in economy | Target reduction[1] | Anticipated reduction[2] |
|---|---|---|
| Ireland's Emissions | 51% | 29%[3] \| 42%[4] |

| By Sector | % Emissions total[1] | Target reduction | Anticipated reduction |
|---|---|---|---|
| Agriculture | 34.3% | 25% | 19% |
| Transport | 17.1% | 50% | 41% |
| Electricity | 14.4% | 75% | 62% |
| Built Environment | 11% | 45% Commercial<br>40% Residential | 50% Commercial<br>48% Residential |
| Land Use, Land Use Change and Forestry (LULUCF) | 10.7% | N/A | +15% |
| Industry | 9.7% | 35% | 11% |
| Circular Economy | 2.8% | 50% | 21% |
| Public Sector | 1.1% | 51% | 49% |

**Target reduction**(1) relates to the stated emissions reduction targets which have been set within the Climate Action Plan to support Ireland in achieving its legally binding target of reducing total greenhouse gas emissions by 51% by 2030.

**Anticipated reduction**(2) relates to the emissions reduction that would potentially be realised, assuming all measures within the Climate Action Plan are implemented according to plan based on EPA forecasts. At present this anticipated reduction remains below Ireland's emissions target reduction for both sectors as well as across the economy.

However, **achieving the anticipated reduction will be a challenge** and is unlikely to be met by 2030.

[1]Ireland's Climate Action Plan 2024.
[2]EPA Greenhouse gas emissions projections 2022-2040. Greenhouse-Gas-Emissions-Projections-and-National-and-EU-targets_ST.pdf (epa.ie)
[3]Refers to EPA's latest GHG emissions projects modelled forecasts in a with additional measures scenario
[4]Refers to EPA's latest GHG emissions projects taking into account unmodelled measures and unallocated savings

# Sector Summaries

## Agriculture

The Agricultural Sector is the largest contributor to Ireland's GHG emissions.

To achieve this sectoral target, it will be crucial to promote reforestation and accelerate deployment of new technologies focused on limiting methane emissions.

## Transport

Despite fuel price hikes and electric vehicle (EV) adoption, Transport is unlikely to achieve its targets.

Investment in EV charging infrastructure, public transport and active travel along with tax incentives on usage of EVs, renewable fuels etc. will be key enablers to close this gap.

## Electricity

Transport, heating, and Industry's dependence on electrification for decarbonisation will be critical for this sector in addressing the gaps.

Accelerating deployment of renewables – grid, planning and route to market will be key in addressing this shortfall.

## Built Environment

The Built Environment is one of the only sectors estimated to exceed its 2030 targets, driven by a focus on retrofitting existing dwellings and installing heat pumps.

Continued activity is important as increased prices may have suppressed demand in recent years.

## Land Use, Land Use Change and Forestry (LULUCF)

While emissions are forecast by the EPA to continue increasing, there are green shoots of hope primarily driven by the diversification opportunities for farmers such as organics, anaerobic digestion, tillage and incoming EU Nature Restoration Law.

## Industry

There has been continued focus on initiatives such as Green Hydrogen and Green Procurement Strategy and Action Plan.

However, to achieve targets, electrification of heat using alternate construction materials and increased use of biomethane will be key drivers.

## Circular Economy

With a circularity rate of 1.8%, Ireland lags well behind the EU average of 12.8%.

Developing prevention strategies, improving capture rates and reducing non-recyclable materials will aid in achieving targets.

## Public Sector

Public Sector bodies have to lead by example by deploying policies and tighter governance frameworks to meet their 2030 targets. Purchasing energy from "green" energy suppliers, use of onsite renewables such as solar panels and accelerating the rate of electrification will help in continuing this trend.

## Marine Environment

Recent changes within the marine environment include the transformation of the regulatory and planning regime and an increased focus on renewable energy, biodiversity conservation and climate resilience. Next steps in the sector include the publication of the next Seafood Sector Adaptation Plan.

## Carbon Pricing & Cross-Cutting Policies

Key practices in place to achieve a low-carbon economy include carbon pricing and carbon tax. The 2024 budget included an increase in the Irish carbon tax rate to €56 per tonne of $CO_2e$ emitted (this increase results in approximately 1.7c extra cost per litre of petrol for customers).

## Local Authorities

Local Authorities are proving well placed to strengthen alignment between national climate policy and the delivery of effective climate action at local and community levels, having already met both 2030 and 2050 energy and emission targets and built resilience to the impacts of climate change.

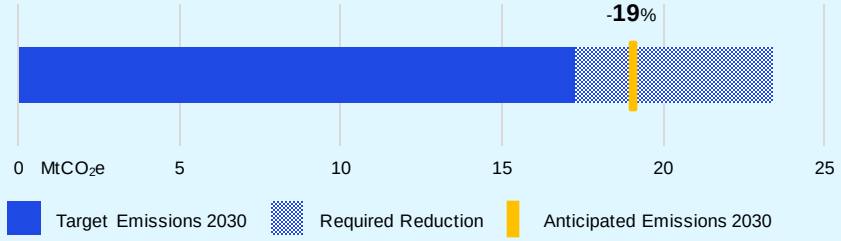
# Agriculture

**Sectoral GHG Emissions**


## Key Metrics

| 23.39 $MtCO_2e$ | 23.34 $MtCO_2e$ | 17.25 $MtCO_2e$ | 0 % |
|---|---|---|---|
| 2018 Baseline | 2022 Emissions | 2030 Target | Change to date |

## Progress Against 2030 Targets




- The Agriculture sector is **not anticipated to meet its target** of a 25% reduction in GHG emissions by 2030.
- Instead, Agriculture is anticipated to **miss the target by 6%**, with the sector's GHG emissions **only reducing by an estimated 19% by 2030.** [1]

## Closing the Gap

In line with Agriculture's sectoral targets, CAP24 emphasises reducing the usage of chemical fertiliser, increasing reforestation efforts, and developing an agri-centric biomethane sector in Ireland. Additional measures could include incorporating emissions reduction potential based on latest science, using latest technologies to limit methane emissions and beneficial diversification opportunities for farmers.

[1]Figures based on EPA's 'Ireland's Greenhouse Gas Emissions Projections 2022-2040' assuming With Additional Measures scenario.

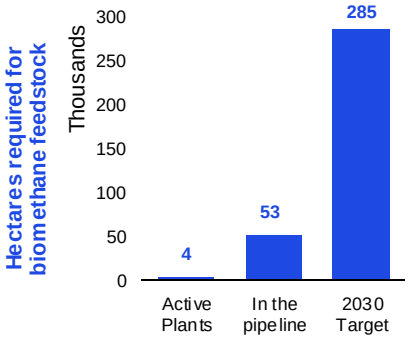
## Our Perspective

The agriculture sector is the largest contributor to Ireland's GHG emissions, contributing 34.3% of overall emissions in 2022. Striking a balance between food production, environmental sustainability and biodiversity is urgent as the sector grapples with the challenge of meeting climate targets.

The many biological processes in the sector make agricultural emissions particularly complex. The largest contributor to emissions is the methane (CH4) produced in cattle digestive system (enteric fermentation) followed by nitrous oxides (NOx) released from fertilisers. Both of these are difficult to abate as the very act of producing food, fuel, or fibre inherently entails residual emissions, though inventive and proven measures in the CAP are a good starting point.

Beyond emissions, the agricultural sector grapples with critical issues related to land-use and management. Farmers are at the forefront of transitioning towards land-use practices that champion biodiversity and safeguard natural habitats. This shift necessitates a fundamental change in farming methods to improve climate change resilience and reduce carbon emissions, such as promotion of agroforestry and diverse crop rotations. CAP24 sets out a number of beneficial diversification opportunities for livestock farmers. Along with forestry, organics and tillage, there is now a focus on encouraging farmers into the energy production sector with anaerobic digestion to produce biomethane seen as a key way to reduce emissions in the agriculture and energy sector. The Draft National Biomethane Strategy estimates that c. 5% of Ireland's farmland will be required to produce feedstock for biomethane production by 2030 to reach the CAP targets. This presents a significant opportunity for farmers looking to transition from traditional farming practices or to grow incremental feedstocks on their land.

However, these changes require investment, with capital investment for a full-scale biomethane sector estimated at €3bn, while emission reducing schemes such as the Low Emission Slurry Spreading Equipment Scheme cost up to €90,000 per qualifying farmer.



# Agriculture

**Sectoral GHG Emissions**

| 34.3% | 17.1% | 14.4% | 11% | 10.7% | 9.7% | 2.8% | 1.1% |
|---|---|---|---|---|---|---|---|

## Key measures to decarbonise the agriculture sector

### Provide Diversification Options to Livestock Farmers

- Increase organic farming to **450,000 hectare** (10%) by **2030**. Approximately 176,000 hectare of land is used for organic farming at present.
- **Government has incentivised organic farming** under Organic Farming Scheme, by **increasing budget allocation from €13M in 2022 to €57M** for **2024**.
- Mobilise **Food Vision recommendations** on diversification, including cultivations of biomethane feedstocks, tillage, afforestation, and reduced management intensity of grasslands.
- Target earlier finishing age of beef (**24-25 mo.** by **2025** and **22-23 mo.** by **2030**).

### Reduced Chemical Fertiliser Usage & Improved Efficiency of Animals

- Decrease chemical nitrogen fertiliser use; target of **330,000 tonnes** by **2025** and of **300,000** tonnes by **2030**.
- Currently, the use of chemical nitrogen stands at approximately 343,000 tonnes as of 2023, representing a 14% decrease from 2022 levels.
  To maintain the trend, Government is supporting a shift to more efficient nitrogen use through initiatives like multi-species **swards, low-emission slurry spreading systems,** and **organic farming.**

### Development of Domestic Biomethane Industry

- Introduction of the **Renewable Heat Obligation** (RHO) by **2024** is expected to incentivise biomethane production.
- National Biomethane Strategy outlines recommendations for sustainable production of **1 TWh** of biomethane by **2025** and **5.7 TWh** by **2030.**
- **Biomethane Working Group** to align planning, regulation and markets, delivering the policy required to meet targets.

### Expansion of the Tillage and Horticulture sector

- In 2022, tillage increased to roughly **349,000 hectare**, nearly the 2025 target. **Food Vision 2030 Tillage Group** aims to grow the tillage area to **360,000 ha** by **2025** and **400,000 hectare** by **2030.**
- **Bioeconomy Action Plan** to support innovations to establish sustainable bio-based primary production and circular value chains, coordinating with agri-biomethane action.
- Use policy mechanisms like **the Common Agricultural Policy Strategic Plan 2023-2027** and increase the budget for the **Protein Aid Scheme to produce potentially 400,000 hectare of native legumes.**

**Russell Smyth**
Partner
Head of KPMG Sustainable Futures

**Addressing Ireland's agricultural emissions is a sensitive issue. Success lies in understanding the interaction between agriculture and land use, skilful deployment of cutting-edge research and technology, and commitment to fair and equitable transition.**

# Transport

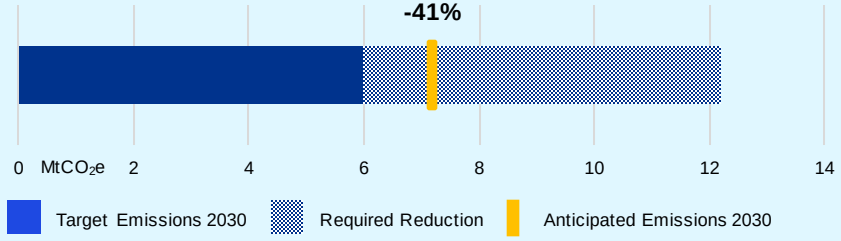
**Sectoral GHG Emissions**

34.3% | **17.1%** | 14.4% | 11% | 10.7% | 9.7% | 2.8% | 1.1%

## Key Metrics

| 12.2 $MtCO_2e$ | 11.6 $MtCO_2e$ | 6.1 $MtCO_2e$ | -5% |
|---|---|---|---|
| 2018 Baseline | 2022 Emissions | 2030 Target | Change to date |

## Progress Against 2030 Targets




- The Transport sector has been set a target to reduce emissions by 50% by 2030; however, it is **not on course to meet this target.**
- The sector is anticipated to reduce its emissions by **41% by 2030**. As such, this sector will likely **miss its target by an estimated 9%.** [1]

## Closing the Gap

The CAP suggests investment in key technologies, such as electrification of passenger cars, trucks / vans, buses, and **charging infrastructure**, is essential to reach sectoral targets, with continued Government incentives playing a role in individual uptake. Further measures to address unallocated savings include encouraging further **modal shifts**, especially freight shifts to rail, and promoting use of **sustainable biofuel** in sectors such as domestic aviation and maritime.

[1] Figures based on EPA's 'Ireland's Greenhouse Gas Emissions Projections 2022-2040' assuming With Additional Measures scenario.
[2] Based on numbers from Society of the Irish Motor Industry - 2023 Total New Vehicle Stats
[3] KPMG Powering tomorrow: Irish attitudes to energy transition

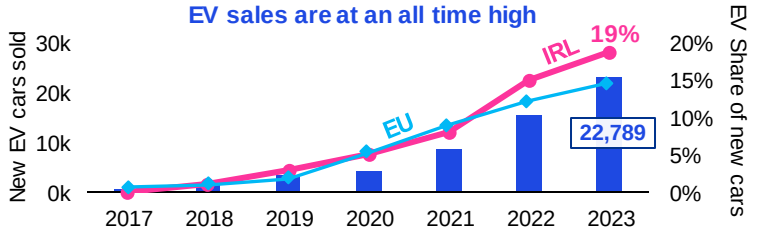
## Our Perspective

The key to decarbonising transport lies in changing the way we move about in our lives on a day-to-day basis according to CAP24's Avoid-Shift-Improve approach to reducing transport emissions. In prioritised order, we should strive to Avoid the need for travel and reduce trip lengths, Shift transportation mode for instance from car to bus, and Improve vehicle efficiency.

Developing and promoting public and safe active transportation is a crucial decarbonisation lever. This responsibility falls largely on politicians and policy makers as they establish investment frameworks and develop long-term strategic plans for Ireland's transport future. In recent years, publications such as the National Investment Framework for Transport in Ireland, and the National Sustainable Mobility Policy steer Ireland towards sustainable transport alternatives .

Our dependency on fossil fuelled transportation is inelastic. Accessibility to private transport is deeply ingrained in our movement patterns. Consequently, the majority of short-term emissions reductions will come through the Improve lever. For private transport, this means EVs. Ireland achieved a record high of new EV registrations reaching 19% of new cars in 20232, well above the EU average. Yet, Ireland still underperforms in comparison to leaders like Norway and Sweden. A range of hurdles remain including new EV vehicle costs, which a recent KPMG report 3 found to be the main barrier for 50% of the population. As such, continued Government incentives could be a required measure to accelerate uptake among individuals.

Heavier vehicles like HGVs and coaches are harder to electrify. Instead, these must transition to future fuels such as biomethane, hydrogen and sustainable biofuels. Unlike today, where the vast majority of our fuels are imported, there is significant potential for domestic production of these fuels today, particularly from biomethane, with Compressed natural Gas Vehicles (CNG) already available on the market.



# Transport

**Sectoral GHG Emissions**

| 34.3% | 17.1% | 14.4% | 11% | 10.7% | 9.7% | 2.8% | 1.1% |
|---|---|---|---|---|---|---|---|

## Key measures to decarbonise the transport sector

### Avoid (or reduce need for travel)

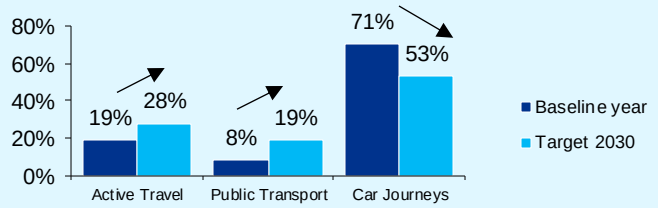
2022 saw a 6% increase in transport emissions on 2021 levels following the lifting of Covid-19 restrictions. However, 2022 emissions were still 4.5% lower than those in 2018.

**Measures to meet 2030 target of 20%** reduction in total vehicle kilometres **50%** reduction in fuel usage include:

- Aligning spatial planning with transport systems
- Reducing car parking rates
- Focusing development around public transport nodes
- Developing city-wide strategies for sustainable transport options
- Emphasising public and active transport for National Transport Demand Management
- Redistributing road space to prioritise active travel and public transport

### Shift (to more environmentally friendly modes)

- Encouraging **public and active travel** over private vehicles and focusing on electric vehicles and charging infrastructure expansion.

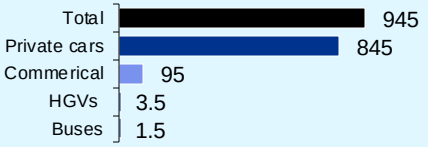



- Expansion of shared mobility services and the continued proportion of shared mobility solutions.
- Achieve **20% reduction in commuting private car kilometres** through Smarter Travel Mark pathfinder and establishing network of remote working hubs
- Identifying training opportunities for upskilling around **e-mobility** in Ireland.
- **Establishing 3,500km** inter-urban cycling network and other sustainable transportation initiatives (MetroLink, DART+, Business Connects) to encourage modal shift from private cars.

### Improve (from current levels)

- Currently, EV uptake is accelerating beyond 2025 projections, with over 100,000 EVs on Irish roads as of August 2023.

**No. of EVs on road by 2030 (in '000)**




- Expand electric rail services.
- Transition to a **zero-emission** urban bus fleet by 2035.
- **300%** charging capacity increasement **by 2025** led by Zero Emission Vehicles Ireland (ZEVI).
- Achieve blend rate targets of E10:B12 (2025) and E10:B20 (2030).

**Allison Davis**
Director
ESG Consulting

**Greening Ireland's transport system is not simply down to electrifying vehicles. While a key factor, we need to invest in our infrastructure, address consumer barriers through policy and investment, and think differently about the future of transport to encourage and incentivise more active and public transport journeys."**

# Electricity

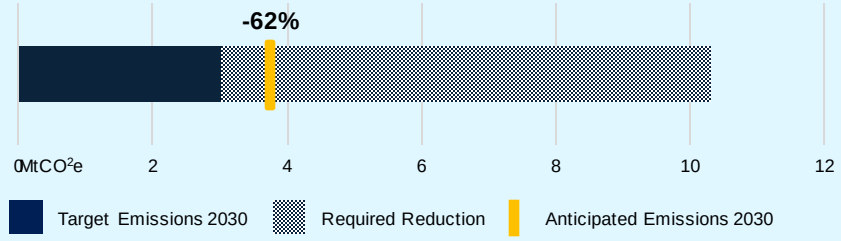
**Sectoral GHG Emissions**

34.3% | 17.1% | **14.4%** | 11% | 10.7% | 9.7% | 2.8% | 1.1%

## Key Metrics

| 10.1 $MtCO_2e$ | 9.7 $MtCO_2e$ | 3 $MtCO_2e$ | -5.4 % |
|---|---|---|---|
| 2018 Baseline | 2022 Emissions | 2030 Target | Change to date |

## Progress Against 2030 Targets




- Ireland's electricity industry is **anticipated to miss its 2030 target** of a 75% reduction in GHG emissions.
- The sector is anticipated to fall short and **miss the target by 13%, reducing by an estimated 62% by 2030.** [1]

## Closing the Gap

To address the shortfall, it is necessary to accelerate the future energy system by exploring **innovative low carbon technologies**. This includes expanding the role of **interconnector capacity, low carbon flexibility** opportunities, and long duration energy storage. The CAP also encourages the incorporation of **carbon capture, utilisation** and **storage technologies** including the retrofit of existing facilities.

[1]Figures based on EPA's 'Ireland's Greenhouse Gas Emissions Projections 2022-2040' assuming With Additional Measures scenario.
[2]Wind Energy Ireland, KPMG: Act Now: Accelerating onshore renewable energy in Ireland

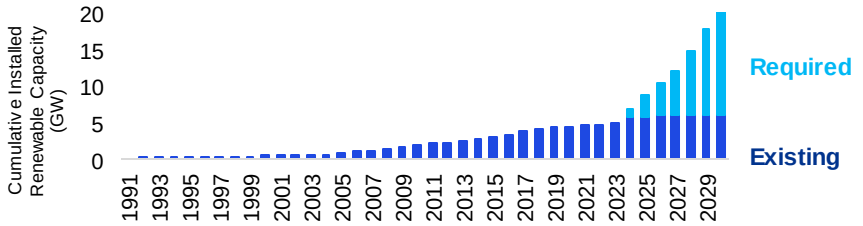
## Our Perspective

Decarbonising our electricity system is fundamental to Ireland's net zero ambitions underpinning our ambitious electrification targets. Ireland is blessed with abundant renewable energy resources and has a well established renewables industry. Yet, a range of challenges remain in areas including planning, grid development, energy policy, and overall ways of working to realise our renewable potential.

Over the last two decades we have developed our renewable sector from virtually zero to covering c. 40% of our electricity demand. The last year saw the completion of Ireland's first offshore auction, ORESS 1, resulting in a remarkably competitive strike price of €86.05/MWh. The lower than expected price is welcome news for consumers however this may increase the risk of non-delivery in a macro environment where inflation and growing costs have challenged several offshore wind projects globally. Furthermore onshore wind and solar assets need to be deployed faster to achieve our renewable electricity targets. The need for change in the sector was recently highlighted by the under performance of last year's RESS 3 auction, which secured only 934 GWh of the targeted 2,000 – 3,500 GWh.

Improving our electricity grid is essential to enabling the higher renewables penetration needed to achieve decarbonisation. Increased investment in grid infrastructure, interconnectors, the deployment of long-duration energy storage, and zero-carbon system services are needed to deliver grid flexibility. Success requires a collaborative effort between public bodies, private stakeholders, and communities, with significant opportunities for innovation and economic opportunities. Robust political support is also crucial to delivering the changes needed.

Deployment of renewables must accelerate quickly to reach the 2030 targets, a tripling of today's renewable generation capacity with the majority of industry experts doubting that Ireland will be able to deliver this goal in time[2]



# Electricity

**Sectoral GHG Emissions**

| 34.3% | 17.1% | **14.4%** | 11% | 10.7% | 9.7% | 2.8% | 1.1% |
|---|---|---|---|---|---|---|---|

## Key measures to decarbonise the electricity sector

### Accelerate Renewable Energy Generation

- Renewable electricity generation to supply **50% of demand** by 2025, and **80%** by 2030. In the first half of 2023, renewables accounted for 43% of electricity generation, up by 0.9% on the first half of 2022.
- **6 GW** onshore wind capacity by **2025** and reach 2030 targets of **9 GW** onshore and at least **5 GW** offshore wind capacity.
- Enable **green hydrogen production** from surplus renewable electricity, including **2 GW** from offshore wind.
- Achieve up to **5 GW** solar PV capacity including at least **1 GW** of non-utility solar by 2025 and **8 GW** including **2.5 GW** of new non-utility solar by 2030.
- Target **1.6 GW** of installed **micro-generation capacity by 2030** and implementation of **small-scale generation**.
- Secure investment **in transmission and distribution systems** to maximise use and reduce hinderances on the system.

### Accelerate Grid Flexibility

- Deliver **2 GW** of new **flexible gas-fired power generation** by 2030.
- **Transform** the **flexibility** of the **electricity system**, funded and incentivised through **regulatory price control**.
- Establish **investment framework** and **competitive market arrangement** needed to deliver **zero carbon systems services**.
- Deliver three **new electricity transmission grid connections or interconnectors** and explore hybrid interconnectors.
- Increase deployment of **medium to long-term storage technologies**.

### Manage Electricity Demand Management

- Ensure that **15-20%** of electricity system demand is flexible by 2025 and **20-30%** by 2030, to reduce peak demand and shift the demand to times of higher renewable supply.
- Facilitate customers, businesses, and communities to participate in **demand flexibility services**.
- Publish a regulatory decision on **dynamic green electricity demand**.
- Deliver a demand side strategy that facilitates **zero carbon demand**, incentivises **low carbon electricity consumption**, aligning with **EU energy efficiency requirements**, while facilitating **electrification targets**.

**Colm O'Neill**
Partner
Head of Energy, Utilities & Telecom

**"The lack of deployed capacity is not for lack of developer appetite. Several GW of renewable installations are stuck in the planning system, which has contributed significantly to delays in deployment over the last years. Last year's Planning and Development Bill aims to overhaul the system and accelerate timelines. Though it remains to be seen whether the forthcoming changes and resources are sufficient, recent signs are positive."**

# Built Environment

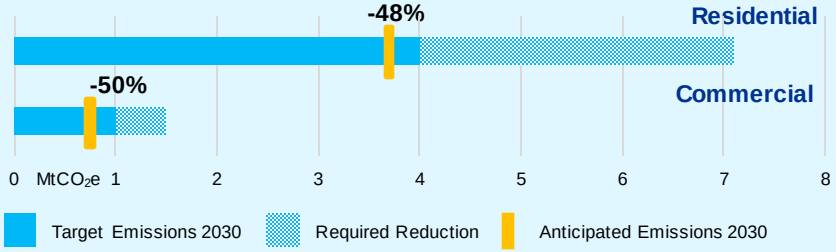
**Sectoral GHG Emissions**

| 34.3% | 17.1% | 14.4% | **11%** | 10.7% | 9.7% | 2.8% | 1.1% |
|---|---|---|---|---|---|---|---|

## Key Metrics

| 9 $MtCO_2e$ | 7.5 $MtCO_2e$ | 5 $MtCO_2e$ | -12 % |
|---|---|---|---|
| 2018 Baseline | 2022 Emissions | 2030 Target | Change to date |

## Progress Against 2030 Targets




- Built Environment sector looks **set to exceed 2030 GHG emissions reductions targets** in both the residential and commercial industries.
- The residential sector is forecasted to **exceed its 40% target by an estimated 8%**, while the commercial industry will likely **surpass its 45% target by an estimated 5% in 2030**. [1]

## Closing the Gap

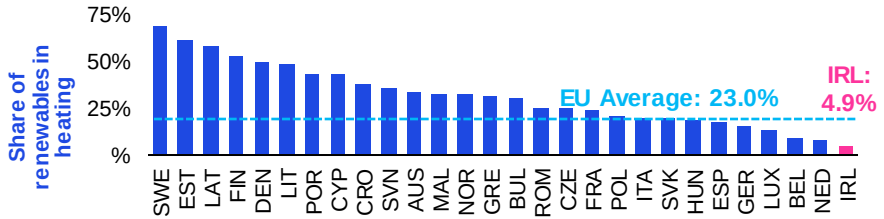
While the Built Environment is anticipated to meet, and possibly surpass its targets in line with EU Energy Efficiency Directive, continued action will be required; for example, retrofitting through heat pumps in social and public buildings and driving further **behavioural change** and adoption of **decarbonised technologies**.

[1]Figures based on EPA's 'Ireland's Greenhouse Gas Emissions Projections 2022-2040' assuming With Additional Measures scenario.
[2] SEAI: Energy in Ireland 2022

## Our Perspective

The residential sector is rife with carbon emissions with 72.6% of energy used in the residential sector being provided through fossil fuel sources[2] (SEAI, 2022). Phasing out fossil fuels by sustainable construction, retrofitting and electrification of heating is a complex and costly endeavour but essential to enhance energy efficiency and decarbonise the sector. Based on SEAI numbers from 2023, the total cost to reach the 2030 targets for BER upgrades and retrofits range between €20bn and €30bn for homes, split between grants and private investments.

Electrification of heat through heat pumps is a critical decarbonise the built environment. Currently, Ireland's share of renewables in heating is the lowest in the EU at only 5% (Eurostat). Replacing fossil-based heating with electricity will significantly improve Ireland's performance in the metrics owing to the increased efficiency of heat pumps and high share of renewables in the Irish electricity mix.




Regulatory measures, such as stringent building codes, can drive the industry toward sustainability. However, skilled labour shortages may hamper Ireland's progress: Foreign labour in this area is difficult to import with similar shortages across Europe. Measures to improve the supply chain and skilled labour may be necessary to enable progression towards Ireland's built environments energy targets.

Real transformation in the built environment requires a heavy reliance on decarbonising the residential, public and, commercial heating as well as through a thorough retrofitting of Irish dwellings. A just transfer for all segments of Irish society is essential considering the affordability aspects of new energy-efficient technologies. Finally, in Ireland, further emphasis on behavioural change is needed in the shape of energy conservation campaigns and educational programmes.

# Built Environment

**Sectoral GHG Emissions**

| 34.3% | 17.1% | 14.4% | **11%** | 10.7% | 9.7% | 2.8% | 1.1% |
|---|---|---|---|---|---|---|---|

## Key measures to decarbonise the built environment sector

### Standards and Regulations

- All new **dwellings** and **buildings** designed and constructed to Nearly Zero-emission Building (NZEB) standard by **2025** and Zero-emission Building (ZEB) by **2030**.
- **170,000** new dwellings using heat pumps by 2025 and **280,000** by 2030. 27,199 residential property upgrades were completed in 2022, exceeding the 26,940 target.
- Ireland's District Heating Steering Group and National Biomethane Strategy will continue to inform and shape future action.

### National Residential Retrofit plan

- Equivalent of **120,000 dwellings** retrofitted to BER B2 / cost optimal by **2025**, increasing to **500,000** in **2030**.
- **45,000 existing** dwellings using heat pumps by **2025**, increasing to **400,000 in 2030**. 8,481 homes were upgraded to a post-works BER of B2 or better in 2022, representing a 95% increase year-on-year.
- Continued support of National Retrofit Plan to drive delivery and adoption of heat pumps through increased availability of low-interest energy upgrade loans.

### Decarbonisation of Residential Heating

- Deliver up to **2.5 TWh** of residential district heating by 2030 (up from 0.7 TWh in 2025).
- Up to **0.7 TWh** of heating provided by biomethane by 2030 (up from 0.4 TWh in 2025).
- Reduction of demand due to **energy efficiency** responses to mitigate reliance on fossil fuels.
- Last year in 2023, 27,200 home energy upgrades were supported, which represents a 79% increase year-on-year.

### Decarbonisation of Public & Commercial Heating

- Develop the appropriate policies and safeguards to supply biomethane for use in commercial and public buildings of up to **0.4 TWh** by 2030 (up from 0.2 TWh in 2025).
- Achieve up to **0.2 TWh** of public and commercial district heating by 2030 (up from 0.1 TWh in 2025).
- Support public and commercial buildings to deliver savings **of 375 $KtCO_2e$** by **2030** (up from 375 $KtCO_2e$ in 2025).

**Michele Connolly**
Partner
Head of Infrastructure Sector and Corporate Finance

# Land Use, Land Use Change and Forestry (LULUCF)

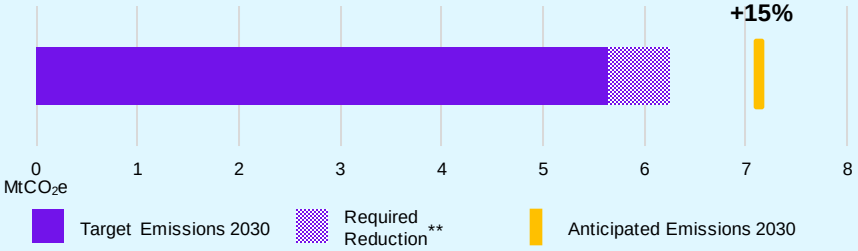
**Sectoral GHG Emissions**

| 34.3% | 17.1% | 14.4% | 11% | **10.7%** | 9.7% | 2.8% | 1.1% |
|---|---|---|---|---|---|---|---|

## Key Metrics

| 6.26 $MtCO_2e$ | 7.31 $MtCO_2e$ | 5.26 $MtCO_2e$ | +16.6 % |
|---|---|---|---|
| 2018 Baseline | 2022 Emissions | 2030 Target** | Change to date |

## Progress Against 2030 Targets




- The LULUCF sector has been a net source of greenhouse gas (GHG) emissions every year between 1990 to 2022
- In 2023 the LULUCF baseline was reviewed and revised to 6.26 MtCO2e. **increasing from 4.8 MtCO2e**. [1]
- Despite the increase in the baseline, emissions from LULUCF are anticipated to **grow by an estimated 15% by 2030**. [1]

****There is no emission ceiling for Ireland but the country has a legal obligation to follow the EU targets for 2026-29**

## Closing the Gap

Measures to address unallocated savings in relation to LULUCF include creating **diversification opportunities for farmers** on land, such as organic farming and tillage. Support for carbon capture in line with Coillte's strategic vision, including **'Biochar'** - utilising biogenic woody residue to produce biochar e.g. for use as soil enhancement.

[1]Figures based on EPA's 'Ireland's Greenhouse Gas Emissions Projections 2022-2040' assuming With Additional Measures scenario

[2]The EU Nature Restoration Law (europa.eu)

## Our Perspective

In many of the other sectors under the CAP, we already know the solutions that exist, and the challenge is to decide how best to implement them in a just and timely manner.

Within the LULUCF sector, our understanding of the emissions baseline and the options available for decarbonisation is still emerging, making long-term strategic planning more difficult. Ireland's LULUCF emissions are still yet to reach their peak: with the Environmental Protection Agency (EPA) projecting emissions from this sector will continue to increase by 54% to 2030 if progress is not made against actions set out in the Climate Action Plan. A key challenge in addressing the problem is the fragmented nature of land ownership in Ireland, which makes it difficult to implement projects at landscape scale. There is detailed work underway however, with Phase 1 of the Land Use Review completed and Phase 2 in development. It is expected this will inform the preparation of future Climate Action Plans, including in supporting the consideration LULUCF targets and the development of policies and measures to achieve emissions reductions for the LULUCF sector.

At the EU level is it unclear whether the Nature Restoration Law (approved by MEPs in February 2024), will be signed off by enough member states to pass. At home, the Law has been endorsed by the Irish Government, the Dail and Irish MEPs so there is expectation that Ireland will still look to deliver against the original objectives to restore degraded ecosystems, 'in particular those with the most potential to capture and store carbon and to prevent and reduce the impact of natural disasters'. [2]

Corporations also have a key role to play in improving their management of land for carbon reduction and biodiversity gains. The Science Based Targets Initiative – the global gold standard for decarbonisation targets – has developed guidance for companies to set robust Food, Land and Agriculture (FLAG) emission reduction targets. KPMG is supporting the Science Based Targets Network (SBTN) Land Hub in developing and piloting methods for setting land system SBTs, enabling companies to set, track and measure progress on targets that are place-based, locally relevant and sustain nature and people.

Forestry is the focus area in CAP24's LULUCF chapter following the publication of the new Forestry Programme in 2023. However, it is important this does not divert attention from other biomes that are equally important in terms of carbon emissions. Both peatlands and grasslands, which cover a significant amount of Ireland's land area, and are critical biomes of international importance.

# Land Use, Land Use Change and Forestry (LULUCF)

**Sectoral GHG Emissions**

| 34.3% | 17.1% | 14.4% | 11% | 10.7% | 9.7% | 2.8% | 1.1% |
|---|---|---|---|---|---|---|---|

## Key measures to decarbonise the LULUCF sector

### Cropland & Grassland Management

- **CAP Strategic Plan** (CSP) providing support measures to reach targets and implementing carbon sequestration measures.
- Increase incorporation of **straw into soil** to **85,000 ha** by 2030 to increase soil organic carbon. In **2023**, over **70,000 ha** of straw were applied to soil.
- Increase inclusion of **cover crops** planted to **85,000 ha** by 2030.
- Improve management of **200,000 ha** and **450,000 ha** of mineral grassland to improve **sequestration** by 2025 and 2030 respectively.
- **25,000 ha** of grasslands on **drained organic soils** to be managed **less intensely** by 2025, and **80,000 ha** by 2030.

### Peatland Management & Rehabilitation

- Continue funding for rehabilitation of **33,000 ha** of post-production peatlands across the Midlands by 2025, increasing to **35,900 ha by 2030** as part of Bord na Móna's *Peatlands Climate Action Scheme* (PCAS) - also referred to as the *Enhanced Decommissioning, Rehabilitation and Restoration Scheme* (EDRRS).
- **EU Just Transition Fund** to support the rehabilitation of degraded peatlands and wetlands.
- Continue funding the **RePEAT Project** to support and improve peatland mapping.
- Seek opportunities for further peatland rehabilitation such as with **'People and Peatlands'** funding scheme.

### Increased Afforestation Rates

- Deliver **Ireland's Forest Strategy** 2023-2030 and **Forestry Programme** 2023-2027.
- **Additional carbon capture** in forests, soils and wood products by 2050 through **'Coillte's Strategic Vision'.**
- Maintain forest area of **11.6%** in 2024 and 2025.
- Assess socio-economic impacts and feasibility of forest management measures detailed in **Teagasc Marginal Abatement Cost Curve (MACC)** in 2024.
- **8,000 ha annual afforestation** targeted up to 2030.
- Continue to manage the Coillte estate, including the age profile of forests to improve carbon efficiency.

**Thomas Ball**
Director,
Nature, Biodiversity
& Land Use Lead

**Overall emissions from LULUCF are projected to continue on an upward trajectory for years to come. Developing solutions at a landscape-scale that deliver for people, climate and nature will be critical for putting the sector on the pathway to meeting Ireland's climate and biodiversity targets"**

# Industry

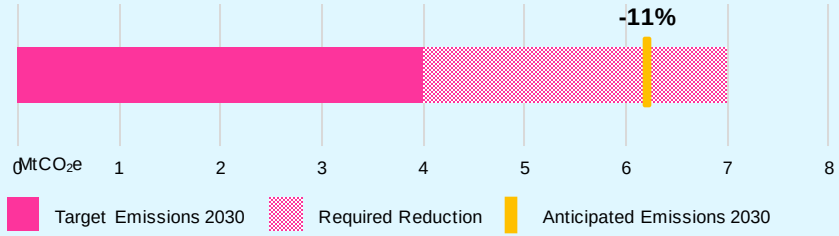
**Sectoral GHG Emissions**

34.3% | 17.1% | 14.4% | 11% | 10.7% | **9.7%** | 2.8% | 1.1%

## Key Metrics

| 7 $MtCO_2e$ | 6.6 $MtCO_2e$ | 4 $MtCO_2e$ | -5.8 % |
|---|---|---|---|
| 2018 Baseline | 2022 Emissions | 2030 Target | Change to date |

## Progress Against 2030 Targets




- Plans to reduce industrial GHG emissions by 35% by 2030 are not expected to be met. [1]
- This sector is anticipated to reduce emissions by 11% by 2030, missing its target by an estimated 24%. [1]

## Closing the Gap

Actions to achieve industrial targets completed include, the launch of a **Green Hydrogen Strategy** in July 2023; the launch of the Draft National Biomethane Strategy for consultation; the Department of Enterprise, Trade and Employment (DETE) successfully securing expert services in the area of decarbonising the cement and construction sectors, and the publication of a **draft Green Public Procurement Strategy** and **Action Plan** for public consultation.

[1]Figures based on EPA's 'Ireland's Greenhouse Gas Emissions Projections 2022-2040' assuming With Additional Measures scenario.

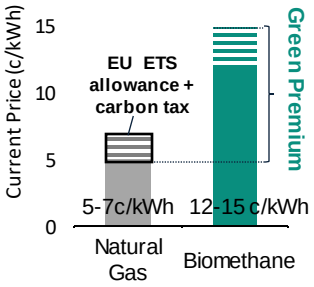
## Our Perspective

Industrial emissions mainly stem from combustion for high temperature heat and process emissions, which are notoriously hard-to-decarbonise. These emissions cannot be easily mitigated with existing solutions such as electrification, and are therefore often costly and complicated to abate.

The approach to decarbonise industrial heating is two-fold. Electrification via heat pumps can cover low-to-medium heat requirements, while higher temperature heat still requires combustion of gases. Heating options are improving: Heat pumps continue to increase the upper limit of their temperature production, while the growing popularity of biomethane for high temperature heat is a recent positive story.

Heat pumps require significant upfront investment but deliver continuous savings through reduced energy costs throughout their lifetime. For higher temperatures, biomethane offers a drop-in replacement for fossil gas. Its popularity is growing as it requires no initial capital investment nor pause in operation. However, due to higher cost of producing biomethane, offtakers pay a "green premium" compared to fossil gas although biomethane is not subject to carbon tax or EU ETS allowances. Ireland has biomethane production potential through anaerobic digestion of agricultural feedstocks and offers industrial companies a clear pathway to decarbonisation.

**Green premium for biomethane is up to 200% of NG price**




In the longer-term, establishing a domestic green hydrogen supply chain has the potential to replace significant amounts of fossil gas used in industry and even create a market for international exports and alternative fuels such as Sustainable Aviation Fuel (SAF) production. The key to this opportunity lays in developing our offshore wind generation, which is expected to come online in the early 2030's.

Few options exist for the decarbonisation of process emissions as $CO_2e$ production is inherent in these production, which include for instance cement production. The inclusion of Carbon Capture and Storage (CCS) in CAP24 offers a tested option for their decarbonisation, though the techno-economic considerations must improve to enable widespread adoption.

# Industry

**Sectoral GHG Emissions**

| 34.3% | 17.1% | 14.4% | 11% | 10.7% | 9.7% | 2.8% | 1.1% |
|---|---|---|---|---|---|---|---|

## Key measures to decarbonise the industry sector

### Carbon-neutral Heating

- Achieve **50-55% share of carbon-neutral heating** in manufacturing processes by 2025; **70-75%** by 2030.
- **Electrification** of new and current manufacturing processes replacing fossil fuels.
- Implement the Decarbonisation Roadmap and the revised **Support Scheme for Renewable Heat (SSRH)**.
- Enterprise Ireland (EI) and IDA Ireland are working with client companies in the manufacturing sectors to **utilise biogas** or **biomethane** sustainably and cost-effectively.

### Increasing Use of Zero-Emissions Gas

- At least **1 TWh consumption** of zero emission gas for industrial heating by 2025, and at least **2.1 TWh** by 2030.
- **Enterprise agencies** to support implementation of zero-emission gas.
- Reduce emission through **renewable hydrogen** in ensuring our energy security and opening up opportunities to become a net exporter of green energy. In 2023, the Government launched a Green Hydrogen Strategy to support decarbonising the industry sector.
- Invest in developing **technological solutions** that can capture and store or use carbon emissions.

### Reduction in Embodied Carbon in Construction Materials

- Ensure **10% reduction in emissions** through product substitution by 2025, **30%** reduction by 2030. Currently, industry emissions accounted for 9.7% of Ireland's total emissions in 2022.
- Reduce the **carbon intensity of clinker** and re-evaluate how we design and build.
- Updating building regulations to **promote the use of timber** in construction.
- Incentivise **greener supply chains** through implementation of, e.g., the Green Hydrogen.

### Fossil Fuel Demand Reduction & Energy Efficiency Measures

- **Reduce industry fossil fuel demand** (through energy efficient measures in manufacturing processes) by 7% by 2025, and by **10% by 2030**.
- Reduction in fossil fuel use in industry sector from 64% of final consumption (2018) to **45%** by 2025 and to **30% by 2030**.
- The SEAI will provide support to a cross section of **10-15 large energy users** to support action.
- Support **industry-led initiatives**, such as Business in the Community Ireland, to support decarbonisation programmes. In 2022, 4,300 people were engaged in climate conversations.

**Cian Kelliher**
Partner
Head of Corporate and Life Sciences

**Decoupling fossil fuel consumption from industry and economic growth requires the use of innovative, sustainable technologies. To ensure Ireland remains flexible and competitive in the market, companies should consider how they partner with their suppliers to reduce emissions across the whole value chain and reduce long term business risk."**

# The Circular Economy & Other Emissions

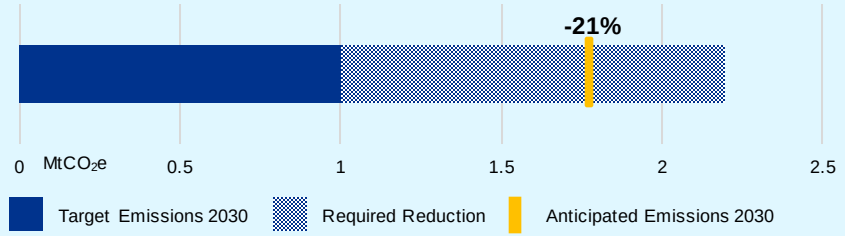
**Sectoral GHG Emissions**

| 34.3% | 17.1% | 14.4% | 11% | 10.7% | 9.7% | **2.8%** | 1.1% |
|---|---|---|---|---|---|---|---|

## Key Metrics

| 2.2 $MtCO_2e$ | 1.9 $MtCO_2e$ | 1 $MtCO_2e$ | -14 % |
|---|---|---|---|
| 2018 Baseline | 2022 Emissions | 2030 Target | Change to date |

## Progress Against 2030 Targets




- Target to reduce emissions **by 50%** in Ireland's Circular Economy model **are not set to be reached by 2030**. [1]
- This area is anticipated to miss the target by 29%, **reducing emissions by an estimated 21% by 2030**. [1]

## Closing the Gap

To help achieve the required reductions, the focus is to bolster the deployment of Waste Action Plan for a Circular Economy 2020 and publish a second Whole of Government Circular Economy Strategy. This will be coupled with prioritising **prevention planning** of key waste materials, encouraging **behavioural change** to reuse and recycle through targeted campaigns, as well **as reducing emissions** from F-gases and from petroleum refinement.

[1]Figures based on EPA's 'Ireland's Greenhouse Gas Emissions Projections 2022-2040' assuming With Additional Measures scenario.

## Our Perspective

The circular economy is a term used to describe the "zero-waste" economy. It aims to reduce the environmental impact of our economy by designing products and systems to be long-lasting, reusable and recyclable. This circular approach contrasts with our current linear economy, which is based on a "take, make, waste" model.

**Current Emissions**

The "Other" sector of Ireland's greenhouse gas (GHG) emissions comprises of F-gases, waste, and petroleum refinement. In 2022, these emissions accounted for around 2.8% of Ireland's total GHG emissions. Waste is the largest source of these emissions at 0.87 $MtCO_2$ eq. while F-gases and petroleum refinement stand at 0.74 $MtCO_2$ eq. and 0.3 $MtCO_2$ eq. respectively.

**Feeding the Future: Turning Food Waste into a Resource**

Ireland, like many developed countries, faces significant challenges with food waste. A circular approach can help to address this problem by focusing on reducing waste at the production stage and seeking alternative uses for unavoidable waste. We look at the practical steps for consideration to tackle this issue such as reducing food waste at the source, implementing food recovery and redistribution programmes and composting & anaerobic digestion.

**Building a Circular Future: The Construction Sector**

Ireland's construction sector has faced increasing pressure to reduce waste and become more sustainable. With a severe housing shortage and many urban areas undergoing regeneration, the sector faces a set of twin challenges: The construction sector must deliver significant housing to meet demand while simultaneously increasing its sustainability. With the sector responsible for almost half of the waste generated in Ireland, a fully circular construction sector is essential for Ireland to achieve its climate goals. We look at the practical steps the sector may take to achieve this.

Transitioning to a circular economy is critical to delivering Ireland's on our climate targets. The economic benefits are clear: A 5% material improvement through scaling circular economy strategies representing an annual €2.3bn opportunity for Ireland. Given the limited impact of actions taken to date on reducing emissions, it is important that circular and design innovations are supported and scaled at pace across every sector. The long term benefits for the resilience of the economy will outweigh the investments and changes to business practices needed in the short term.

# The Circular Economy & Other Emissions

**Sectoral GHG Emissions**

| 34.3% | 17.1% | 14.4% | 11% | 10.7% | 9.7% | **2.8%** | 1.1% |
|---|---|---|---|---|---|---|---|

## Key measures to deliver a Circular Economy

### Prevention

- Implement the updated strategy of the **Waste Action Plan for a Circular Economy** (WAPCE) in 2024. Last year, the second Circular Economy Innovation Grant Scheme awarded €640,000 to 13 projects.
- **National Waste Management Plan for a Circular Economy** 2023-2029 will set out a prevention and waste management framework.
- WAPCE to make mandatory the provision of an **organic waste bin** to all households.
- Reduce **food waste by 50%** by 2030 and reduce the amount of **municipal waste landfilled to 10%** by 2035.
- Limit maximum landfill amount to **472,000** tonnes.
- Establish a national **centre of excellence** for circular manufacturing and innovation.

### Recycling and Reuse

- Recycle **65%** of packaging waste by 2025 and 70% by 2030. Recycle **50%** of plastic packaging waste by 2025 and **55%** by 2030.
- Recycle **65%** of municipal waste by 2035.
- Ensure all plastic packaging is **reusable or recyclable** by 2030.
- **'Deposit and Return Scheme'** (DRS) for plastic bottles and aluminium cans has commenced to promote reuse of plastic and reduce plastic waste
- Achieve **77% collection of plastic drinks** containers by 2025, increasing to **90%** by 2029 and supported by the DRS.
- Incorporate **25%** of recycled plastic in **Polyethylene Terephthalate** (PET) beverage bottles from 2025 and 30% in all plastic beverage bottles by 2030.

### Other Emissions (F-Gases, waste, and petroleum refinement)

- Reduce **F-Gas emissions by 80%** (from 2014 baseline). Emissions from F-Gases, waste, and petroleum refinement accounted for 2.8% of Ireland's GHG emissions in 2022.
- Implement measures required by **EU Regulation** on F-gas usage.
- Separate **collection obligations extended** to include hazardous household waste (by end 2024), and textiles (by end 2024).
- Encourage the use of **renewables in the petroleum refining process**, and measures to reduce petroleum-based fuel use.
- Investigate applicability of use of **biomethane** in the petroleum refining process.

**Shane O'Reilly**
Managing Director
ESG Strategy Lead

**Driving circularity requires an economy-wide mindset shift in how we produce, consume and dispose of goods. To achieve our targets Ireland must incentivise and support all sectors of society to change behaviours and examine their relationship with consumption."**

# Public Sector

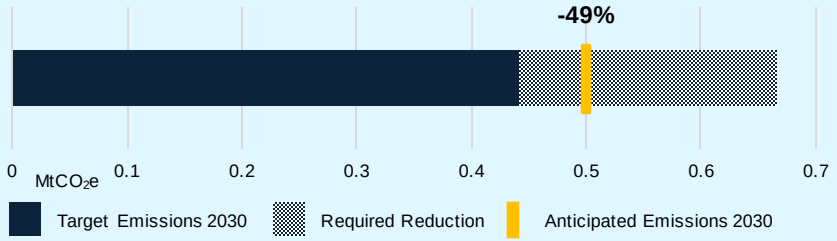
**Sectoral GHG Emissions**

34.3% | 17.1% | 14.4% | 11% | 10.7% | 9.7% | 2.8% | **1.1%**

## Key Metrics

| 0.9 $MtCO_2e$ | 0.668 $MtCO_2e$ | 0.45 $MtCO_2e$ | -25% |
|---|---|---|---|
| 2018 Baseline | 2022 Emissions | 2030 Target | Change to date |

## Progress Against 2030 Targets




- Decarbonising Ireland's Public Sector by 2030 will require reducing GHG emissions by **51%**. [1]
- It is anticipated that this sector will **narrowly miss its target by just 2%**, with forecasts indicating an estimated emissions **reduction of 49% by 2030**. [1]

## Closing the Gap

To maintain the trend and lead by example, this sector needs to take decisive steps such as strengthening the climate action reporting, upskilling to increase the awareness, establishing fleet charging hubs, implementing green public procurement and improving energy efficiencies in buildings through retro fitments.

[1]Figures based on EPA's 'Ireland's Greenhouse Gas Emissions Projections 2022-2040' assuming With Additional Measures scenario.

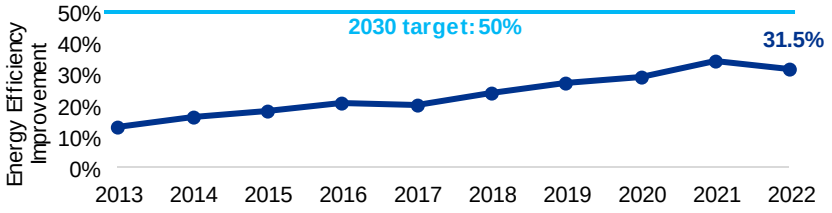
## Our Perspective

The Public Sector aims to lead the transition to a sustainable society by example. Building on the ambitious targets set by CAP23, all public sector bodies have started to implement and promote energy-saving actions. Through its provision of essential goods and services, the potential societal benefits of the public sector transitioning to a sustainable future are far-reaching.

Public Sector bodies are ideally placed to tackle climate change due to their unique societal position, mandate, and resources. However, to effectively leverage their position as a leader in climate change action, Public Sector bodies need to:

- Build capacity and expertise to deliver on climate action. Following on from Guidance issued by the DECC in 2023, CAP24 acknowledges the importance of building capacity through climate action training. 2024 will see the roll-out of centralised climate-related training and upskilling for all Civil Service grades.
- Apply a systems rethink in procurement processes to enable a successful implementation of the Green Public Procurement (GPP) Strategy and Action Plan. The Public Sector spends approximately €18.5 billion a year on goods, services and works highlighting GPP as a vital policy lever in meeting environmental policy objectives.
- Ensure climate action is taken in effective areas. Emissions from buildings and transport account for approximately 50% and 30% of the public sector's overall GHG emissions, respectively. Public sector bodies already undertaking measures such as the retrofitting of building stock and the procurement of electric vehicles are already ongoing. Continued implementation of these measures will be vital to the sector meeting its targets.

**Continued efforts required to meet 2030 energy efficiency targets**



# Public Sector

**Sectoral GHG Emissions**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 34.3% | 17.1% | 14.4% | 11% | 10.7% | 9.7% | 2.8% | 1.1% |

## Key measures to decarbonise the public sector

### Targets

- Achieve a **51% reduction** in greenhouse gas emissions by the **year 2030**. Emissions from the public sector decreased by 1.9% in 2022.
- Enhance energy efficiency within the public sector by **50%** by **2030**.
- Annually revise Climate Action Roadmaps within **6 months** of publishing the Climate Action Plan. Initiate the development of Climate Action Roadmaps in cases where none currently exist.

### People

- Establish **Green Teams** under senior management in all public sector bodies to **drive sustainability**.
- Nominate a Management Board member as the **Climate and Sustainability Champion**.
- Integration of **climate action** and **sustainability training and engagement** into staff learning strategies, including for senior management.

### Way of Working

- Public bodies **with >€2 million** energy spend must have a **ISO 50001** certification by end 2024.
- Implement **Green Public Procurement**.
- Ensure alignment with reporting requirement under mandate and disclosure on **SEAI's Public Sector Monitoring & Reporting (M&R) System.**
- **Monitor and reduce waste** across construction, food waste, paper and water, including progressively eliminating all single use items. In 2023, the **Reduce Your Use** campaign targeted reductions in energy use.

### Buildings and Vehicles

- Ahead of 2025 target, **procure only zero-emissions vehicles** from the end of 2022.
- **Phase out parking** to buildings accessible by public transport services.
- **Display Energy Certificate** in every public building.
- **Post 2023**, no installation of fossil fuel heating systems for new building or retrofits.
- Public sector bodies to retrofit at least one building and develop a portfolio building stock plan by the end of 2024.

**Cormac Deady**
Partner
Head of Government & Public Sector

**For the Public Sector to achieve CAP24 targets, leaders will need to think strategically about the best way to both retrofit their estate and decarbonise their transport fleet."**

# Marine Environment

## Our Perspective

There has been significant change in Ireland's marine sector in recent years, with the transformation of the regulatory and planning regime and an increased focus on renewable energy, biodiversity conservation, and climate resilience.

We have seen a shift towards a plan-led system which aims to support the decarbonisation of the energy sector and sustainable development of offshore renewable energy (ORE). A key element in achieving these ORE ambitions was the establishment of the Maritime Area Regulatory Authority (MARA) in 2023, as it forms the basis for investment pathways that should help realise Ireland's climate ambitions.

However, ORE development must be balanced with the conservation, protection, and recovery of marine biodiversity, in line with international and EU targets. As part of this effort, legislation for Marine Protected Areas (MPAs) is on the way, and Ecological Sensitivity Analysis for the South Coast was completed in 2023 to assess suitable areas for protection. In January 2024, 305,000 hectares of marine waters off the coast of Wexford were designated as a Special Protection Area, bringing the total percentage of marine protected areas up to 10% - a positive step on the journey to 30% by 2030. Looking ahead, the ambitious marine restoration targets in the soon-to-be-adopted EU Nature Restoration Law may pose challenges in the short-term.

Ireland's seafood sector must also transition to carbon neutrality, in line with EU targets to improve the sustainability and resilience of the EU fisheries and aquaculture sector. The sector is still dependent on fossil fuels for vessels, tractors and fishing gear, and the carbon intensity of fish and aquaculture products varies. The recent Life Cycle Assessment from Bord Iascaigh Mhara is a welcome addition to our understanding of the carbon impacts of the sector, and further research is expected in the coming years with the publication of the next Seafood Sector Adaptation Plan.

# Marine Environment

## Key measures to decarbonise the marine sector

### Development Management Regime for Maritime Area & Offshore Energy

- Adopt statutory **Marine Planning Policy Statement** (MPPS) which will have a lifecycle of **3 years**.
- MPPS will set out **priorities, principles** and **policies** in relation to **maritime planning.**
- **Assess renewable energy projects** and **support infrastructure applications** in line with MPPS and National Marine Planning Framework (NMPF).
- **NMPF** was established in **2021** to ensure sustainable use of Ireland's marine resources up to 2040.

### Identify, Designate & Manage MPAs

- Enact the **MPA (Marine Protected Areas) Bill** to begin the process of achieving **30% MPA coverage** by 2030.
- Adopt statutory **Ocean Environment Policy Statement.**
- Undertake **Ecological Sensitivity Analysis** for the South Coast in order to assess for suitable areas for protection and inform decision-making for offshore renewable energy **infrastructure siting**.

### Marine Climate Change Monitoring

- Develop a **pilot assessment** of the impacts of climate change on Ireland's marine environment to the European Commission under the **Marine Strategy Framework Directive** (MSFD).
- Identify **knowledge gaps and research needs**, engage in a **prioritisation process**, and invest further in **research actions** to address the ongoing challenges presented by climate change and its effects.

### Marine Adaptation & Mitigation

- Develop the new National Marine Research and Innovation Strategy, **Ocean Knowledge 2030**.
- Invest in **research to address climate change issues** such as rising sea levels and fish distribution.
- Explore increasing shore power, providing electric vehicle charging points in harbours and other means of **reducing fossil fuel dependence** across fishery harbour centres.
- Develop **ocean climate outreach material** and hold knowledge transfer **conferences** to increase engagement and understanding such as the outputs of the **Blue Carbon Footprint report**.

**James Delahunt**
Partner
Corporate Finance

**With growing regulatory pressures on Marine Protected Areas, the Marine sector will need to balance our offshore renewable energy development, the protection of our marine environment, and the future of Ireland's seafood sector if we want to achieve our targets."**

# Carbon Pricing and Cross-cutting Policies

## Our Perspective

**Carbon Pricing and the Emissions Trading System:** Ireland's carbon pricing, underpinned by a robust carbon tax and the EU Emissions Trading System (ETS), represents a core mechanism towards achieving a low-carbon economy. The carbon tax is a cornerstone of Ireland's climate policy, directly incentivising reduced carbon emissions and financing sustainable initiatives through annual increases in the carbon tax rate through to 2030.

Among the most comprehensive globally, Ireland's carbon tax encompasses nearly half of all carbon dioxide equivalent (CO2e) emissions. As part of the 2024 budget, it was announced that the Irish carbon tax would increase by €7.50 per tonne of $CO_2e$ emitted, from €48.50 to €56.00, with this increase applicable for auto fuels from the 11th of October 2023. For all other fuels, the carbon tax will increase from the 1st of May 2024. Ireland's commitment is underpinned by the EU ETS, a cap-and-trade system that sets a decreasing cap on emissions, promoting investments in clean technologies. The ETS's recent expansion under the 'Fit for 55' package which targets a 55% reduction in emissions by 2030, positions Ireland at the forefront of climate action. These comprehensive measures signify Ireland's commitment to a sustainable future, balancing economic growth with environmental stewardship.

**CBAM and its Impact on the Irish Economy:** The introduction of the Carbon Border Adjustment Mechanism (CBAM) represents a significant shift in global trade dynamics. CBAM will take effect in 2026, with the first reporting period for importers ending 31 January 2024, and encourages Ireland to spearhead green innovation and sustainable economic practices. Despite potential cost implications for import-dependent sectors, it presents significant opportunities for Irish low-carbon exporters in the EU.

**Carbon Pricing's Impact on the Irish Economy:** While the escalating carbon tax has steered industries and individuals towards cleaner alternatives, it has also rendered carbon-intensive options costlier. Significant contributors to Ireland's GHG emissions such as agriculture and transport now face the significant prospect of aligning with carbon pricing norms while maintaining productivity and competitiveness. However, we envision that this regulatory drive has the potential to spark innovation, driving not just a reduction in emissions but also paving the way for a resilient, future-proof economy.

# Carbon Pricing and Cross-cutting Policies

## Key measures to deliver Cross-cutting policy objectives

### Environmental Taxation and Carbon Pricing

- Continue to increase the **annual rate of carbon tax** until 2030 through existing legislation. At present, environmental taxes contribute around €5.3 billion (6.4%) to Ireland's tax revenue.
- Promote **electric vehicle uptake** through **tax incentives** including Vehicle Registration Tax (VRT) relief and Benefit-in-Kind (BIK) exemptions.
- CO2 **emissions-based regime** placing scaling tax liabilities on private vehicles.
- Review **environmental tax measures** such as phasing out VAT rebates on commercial fuel.
- Reform of **EU Emissions Trading System**, introduction **EU ETS II** and **Social Climate fund**, and establishment of a unique **Carbon Border Adjustment Mechanism**.
- Update **Infrastructure Guidelines** and shadow **price of carbon** to ensure emissions are priced appropriately.

### Mobilisation of Investment for Climate Action

- Continue to promote investments through four funds under **Project Ireland 2040** with an estimated collective budget of **€4 billion** to 2027.
- Establishment of a **€14 billion Infrastructure, Climate, and Nature Fund** to mitigate future economic, demographic and environmental risks.
- Broaden the coverage of **green budgeting** to all areas of public spending and align with existing performance and equality budgeting framework.
- Leverage **private sector capital** through partnerships with **commercial state sector, New ERA** and the **European Investment Bank**.
- Promote a **sustainable financial system** through reporting compliance, market development for Ireland's Sovereign Green Bond and financial sector upskilling.

### Additional Measures

- Revise **National Planning Framework** to provide opportunities to integrate policies to help achieve the national climate objective.
- Continue to implement the **Harnessing Digital - The Digital Ireland Framework** through a variety of initiatives such as the **National Broadband Plan** and a new **Enterprise Digital Advisory Forum**. This framework was launched in 2022 to work towards achieving Ireland's climate targets.
- Progress implementation of **Bioeconomy Action Plan 2023-2025** through promoting **understanding** and **awareness** of the **bioeconomy, biobased innovation** and **solutions,** the development of **guidelines,** and the launch of a call developing further opportunities for the bioeconomy.

**Paul O'Brien**
Partner
Energy &
ESG Tax Lead

**"The increase in carbon tax will not only incentivise cleaner alternatives but also serves as a catalyst for innovation, providing an opportunity for companies to gain a competitive advantage while shaping a resilient economy in alignment with environmental goals."**

# Local Authorities

## Our Perspective

Local Authorities have a key role to play in addressing and driving forward climate action at a local level. In addition to meeting their 2030 and 2050 energy and emission targets, and developing resilience to the impacts of climate change, they are well placed to strengthen alignment between national climate policy and the delivery of effective climate action at local and community levels.

The year ahead will see Local Authorities formally adopt their first Local Authority Climate Action Plans (LACAPs). These plans will be consistent with the most recent Climate Action Plan and National Adaptation Framework and will address both the mitigation of greenhouse gas emissions and adaptation to climate impacts across the Local Authority area. Over the past 12 months, and to support development of these plans, Local Authorities have conducted Climate Change Risk Assessments and developed Baseline Emission Inventories for their respective administrative areas. In addition, Local Authorities have designated areas to implement a Decarbonising Zone (DZ) and developed plans to support implementation. Once adopted, the LACAPs will be valid for the period 2024 – 2029 and are subject to update at least every five years. The LACAPs will play a key role in local authorities meeting national emission reductions targets and developing resilience to the impacts of climate change.

Through their LACAPs, Local Authorities are ideally placed to bring multiple national and local agendas together to successfully implement the actions outlined in CAP24. However, to effectively leverage their position at the coal face of climate action, Local Authorities need to:

- Develop technical capacity and expertise to deliver on the LACAP ambition to deliver integrated climate action. This needs to address both emission reduction targets while ensuring the resilience of their own Local Authority areas.
- Increase collaboration with adjoining Local Authorities, National Government and State Agencies to ensure delivery of coherent and integrated climate action at the local level, in line the national climate action policy objectives.
- Ensure greater participation of local communities and the private sector in decision making processes to ensure the concepts of just transition and just resilience are considered in the planning and delivering of climate action.

# Local Authorities

## Key measures to climate proof Local Authorities

### Decarbonising Zones (DZ)

- DZ action group will be formed to explore the **strategic challenges and opportunities** that the implementation of the DZs presents.
- The Department of Housing, Local Government and Heritage is **supporting capacity building** in local authorities by funding two dedicated staff in each non-city local authority to lead implementation of the Government's Town Centre.
- Roll out Phase 2 of **the Smart and Sustainable Mobility Accelerator Programme**. The programme will be delivered in four phases up to December 2025. An online platform was launched as part of the Accelerator Project and will continue to be developed as a collaborative space for local authorities in 2024.

### Local Authority (LA) Climate Action Plans & Engagement

- Each **LA is required to prepare a Climate Action Plan** and is responsible for reducing greenhouse gas emissions across its own assets and infrastructure. LAs will devise an approach for the annual implementation of actions, track progress through KPIs, and report on progress at local and national levels.
- A **training needs analysis** for the Local Authority Climate Action Training Programme will be carried out in early 2024 to determine its future direction, training target numbers, and specific target groups to help strengthen the implementation of climate action.
- **The Local Authority Climate Action Training Programme** commenced in 2021 to build local authorities climate action capacity and by 2023, approximately 20,600 people had received training.

### Climate Action Teams and Programmes

- Climate Action Regional Offices (CAROs) in 2024 will facilitate coordination and **engagement between local authorities** to share information and will conduct a review of all LA CAPs to identify common themes and actions. 4 CAROs were set up in 2018 to build capacity of local authorities to respond to climate change.
- The cities of **Cork and Dublin** were selected to **become climate neutral by 2030**. This will be supported through seminars on European funding opportunities and sharing learning from the EU Climate-neutral and Smart Cities Mission.

**Barry O'Dwyer**
Director
Sustainable Futures

**The role of local authorities and the introduction of Local Authority Climate Action Plans are fundamental in achieving our national climate targets, enabling climate action at a regional and local level, and building climate resilience."**

# 03.

# How KPMG can enable the next steps

# How can we help?

KPMG is supporting Irish organisations at all stages of their sustainability journey - from strategy setting, through delivery to reporting and assurance.

# 04.

# Want to know more?

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# Notes

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