



Rialtas na hÉireann  
Government of Ireland

# Climate Action Plan

## Progress Report

**Q2 2023**



Prepared by the Department of the Taoiseach, July 2023  
[gov.ie/ClimateAction](https://gov.ie/ClimateAction)

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# 1 Executive Summary

This is the second Progress Report on Climate Action Plan (CAP) 2023, detailing progress on the 51 actions due for delivery and reporting in Q2 2023. A **delivery rate of 63%** is reported, with 32 of the Q2 actions completing on time.

The progress of actions delayed from Q1 2023 is also included, with 4 of the 9 overdue Q1 actions completing in Q2. Combining delivery from Q1 and Q2 2023, this gives an overall implementation rate of 72% for the CAP23 to date (63 of 87 actions completed so far).

Reflecting the six high impact areas identified in CAP23, the report is organised into sectoral chapters in order of emissions impact (Agriculture, Transport, Electricity, Buildings, LULUCF, and Industry). Attention is given to Key Performance Indicators (KPIs) in each sector, the most recent state of play on [emissions estimates](#) and [projections published by the EPA](#)<sup>1</sup>, action case studies and foresight on high impact actions due later in 2023.

In keeping with the [Q1 2023 Progress Report](#), progress reporting by the Department of the Taoiseach on CAP23 is largely confined to new initiatives or significant steps towards achieving the Government's climate ambitions. As such, the continued implementation of lower impact and/or already established activities ('non-reportable' actions from the CAP23 Annex of Actions) is assumed and do not warrant centralised quarterly reporting. High impact activity is thus detailed in this Q2 2023 Progress Report, with information on every reportable action due this quarter contained in **Appendix 1**.

## 1.1 Climate change news and activity in Q2 2023

Climate change continues to be a pressing global issue, and recent news highlights the urgency of addressing it to reduce its impact on people and our planet.

Climate change is becoming more apparent in our weather and environmental systems. In Q2, a [heatwave in the Atlantic](#) caused sea temperatures off Ireland to be 3 - 4 °C above normal, breaking all temperature records going back as far as 1850. This follows [warnings of](#)

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<sup>1</sup> This includes the Q2 published [EPA emissions projections](#) under WEM (with existing measures) and WAM (with additional measures) scenarios. The WEM scenario includes policies and measures committed to and [being implemented](#) by the end of 2021. WAM assumes implementation of [planned](#) policies and models their predicted impact on GHGs (e.g. some ambitious measures from CAP23).

[the El Niño effect](#) by the World Meteorological Organisation which is expected to cause further spikes in the global temperatures in the near term, exacerbated by climate change.

The human impacts of climate change were outlined this quarter in the latest update of the [Atlas of Mortality and Economic Losses from Weather, Climate and Water-related Hazards](#). It stated that 2 million people have died due to extreme weather events since 1970, 90% of whom were in developing countries. This highlights the disproportionate impact of climate change on the most vulnerable populations in the global community. Additionally, [a report from the European Central Bank](#) found that higher temperatures can cause a rise in headline inflation, including through its impact on food prices. Extreme weather could increase global inflation by as much as 1% every year until 2035, with the authors concluding that climate change poses risks to price stability.

Worldwide climate action nevertheless has also continued in Q2. President Joe Biden [pledged \\$1 billion](#) to a major international climate aid fund, while also committing \$500 million over five years to combat rainforest deforestation through Brazil's Amazon Fund program. European Commission [President Ursula von der Leyen meanwhile joined calls](#) for countries to set a worldwide target for renewable energy by COP28.

Elsewhere, a [report](#) found that emissions from the global power industry may now be declining, thanks to the increased use of renewables. Wind and solar now produce 12% of global electricity, signalling that we are starting to break our dependency on fossil fuels.

Domestically, there has also been climate action progress, as detailed in this Q2 Progress Report. Actions not included for reporting in this quarter include a process to develop a new [National Demand Management Strategy](#) for transport, which was commenced this quarter following the noting by Government of a related Memorandum in April. A Steering Group, which was established in May, will lead the development of the strategy, which is expected to take a year to complete, with widespread public consultation planned. Ireland's first District Heating system in Tallaght also [launched](#) in April. The scheme will save almost 1,500 tonnes of CO<sub>2</sub> each year by using waste heat from a data centre to supply heat to several local public buildings and the TU Tallaght Campus.

Yet, there is more work to do. At the time of Q2 Progress Report preparations, the EPA released provisional estimates of Ireland's Greenhouse Gas (GHG) emissions in 2022. While a reduction of 1.9% in national emissions is expected compared to 2021 (excluding LULUCF), the EPA indicates that 47% of Ireland's first carbon budget (2021-2025) has been

used up in the first 2 years. This creates an extremely challenging annual reduction of 12.4% for each of the remaining years (2023, 2024, 2025) if Ireland is to remain within budget.

Similarly, earlier in the quarter, the [EPA released its annual Projections Report](#) in June. It states that Ireland will not meet the first two carbon budgets (2021-2030) and will only achieve a 29% reduction in Greenhouse Gas (GHG) emissions even if all planned climate measures are fully implemented. This compares to the legally-binding target of a 51% reduction. This suggests that much work remains in elaborating policies and effective delivery mechanisms to make the planned emissions reductions at the scale and pace required. The annual updates of the Climate Action Plan can be used to bring greater clarity to sectoral emissions reduction pathways and roadmaps of actions.

## 1.2 Overview of delivery in Q2 2023

In total, 51 actions were scheduled for delivery and reporting in Q2 2023. An implementation rate of 63% was achieved, with 32 measures completed on time. Delivery rates by responsible Department this quarter are detailed in Table 1. Table 2 demonstrates delivery rates by sector to date (combining delivery from Q1 and Q2 of sectoral actions, irrespective of Departmental ownership), reflective of the whole-of-government effort required to reduce emissions across our economy and society.

**Table 1 Delivery rate by Department on Q2 2023 measures**

Department	No. of Q2 actions due	Complete	Delayed	Delivery Rate
DECC	29	20	9	69%
DAFM	8	4	4	50%
D/Transport	5	4	1	80%
DETE	3	2	1	67%
DFHERIS	2	2	0	100%
DHLGH	1	0	1	0%
DPENDR	1	0	1	0%
DFA	1	0	1	0%
DCEDIY	1	0	1	0%
<b>TOTAL</b>	<b>51</b>	<b>32</b>	<b>19</b>	<b>63%</b>

**Table 2 Delivery rate by sector to date under CAP23 (combining Q1 and Q2 delivery of sectoral actions)**

CAP23 Sector	No. of Q1 & Q2 actions due	Complete	Delayed	Delivery Rate
Agriculture	6	5	1	83%
Transport	3	2	1	67%
Electricity	10	8	2	80%
LULUCF	14	12	2	86%
Buildings	14	9	5	64%
Industry	1	1	0	100%
Cross-Cutting	39	26	13	67%
<b>TOTAL</b>	<b>87</b>	<b>63</b>	<b>24</b>	<b>72%</b>

Overall CAP23 implementation stands at 72% to date (63 of 87 actions completed so far). The breakdown of delivery between Q1 and Q2 is contained in Table 3. The 24 delayed actions will continue to be monitored and reported on in Q3 2023 to maintain commitment to their completion.

**Table 2 CAP23 Implementation to end of Q2 2023**

	Measures Completed in the Quarter	Measures Subsequently Delivered	Total Measures Delivered to Date	Measures still Delayed	Delivery Rate
<b>Q1 2023</b>	27	4	31	5	86%
<b>Q2 2023</b>	32	N/A	32	19	63%
<b>TOTAL</b>	<b>59</b>	<b>4</b>	<b>63</b>	<b>24</b>	<b>72%</b>

### 1.2.1 Sectoral actions completed and delayed in Q2 2023

With significant potential for direct emissions reduction, examples of high impact sectoral actions completed and delayed in Q2 2023 are detailed in Tables 4 and 5. They are further expanded upon in sectoral chapters throughout this progress report, with information on every reportable action detailed at Appendix 1.

**Table 3 Examples of high impact sectoral actions and sub-actions completed in Q2 2023**

<b>Sector</b>	<b>Action / sub-action completed in Q2 2023</b>
<b>Agriculture</b>	AG/23/3: Open TAMS 3 to fund Low Emissions Slurry Spreading
<b>Transport</b>	TR/23/62: Put in place regulations to support biofuel trajectory
<b>Electricity</b>	EL/23/10B: Deliver Offshore Renewable Electricity Support Scheme (RESS) Auction
	EL/23/13/A: Publish the Small-Scale Generation Scheme high-level design
<b>Buildings</b>	BE/23/5/A: Introduce a mechanism to ensure that homeowners have the option of only paying the cost of upgrade "net of grant"
<b>LULUCF</b>	LU/23/7A: Provide support for capital investments in grassland management equipment
<b>Industry</b>	EN/23/7: Develop a Policy/regulatory roadmap for green hydrogen

**Table 4 Examples of high impact sectoral actions and sub-actions delayed in Q2 2023**

<b>Sector</b>	<b>Action / sub-action delayed in Q2 2023</b>
<b>Agriculture</b>	AG/23/1: Introduce a National Fertiliser Database
<b>Transport</b>	TR/23/30: Publish National Cycle and Greenway Network
<b>Buildings</b>	BE/23/31/B: Launch a new retrofit scheme aimed at SMEs
<b>LULUCF</b>	LU/23/1: Adopt the new Forestry Programme 2023-2027

### **1.2.2 Cross-cutting actions completed and delayed in Q2 2023**

In addition to high impact sectoral activity, it is important to acknowledge impactful cross-cutting actions completed and delayed in Q2. Combined, these actions are intended to support the delivery of climate action through improvements in governance, finance, planning, research, engagement, resilience, and leadership. They include contributions from across the spectrum of Government Departments, Local Authorities and Agencies and provide an important enabling framework for individual, community, public sector, and business climate action.

Examples of high impact cross-cutting actions completed and delayed in Q2 are detailed in Tables 6 and 7. Information on all cross-cutting actions due for reporting this quarter are contained in Appendix 1.

**Table 5 Examples of high impact cross-cutting actions and sub-actions completed in Q2 2023**

Cross-Cutting Policy Area	Action / sub-action completed in Q2 2023
<b>Research &amp; Innovation</b>	RE/23/17: Launch the final National Challenge Fund calls (sustainable communities and future food systems)
<b>Public Sector Lead</b>	PS/23/9/A: Engage with One Learning on the provision of climate related training and upskilling to the civil service
<b>Adaptation</b>	AD/23/18/B: Host the European Climate Change Adaptation Conference

**Table 6 Examples of high impact cross-cutting actions and sub-actions delayed in Q2 2023**

Cross-Cutting Policy Area	Action / sub-action delayed in Q2 2023
<b>Just Transition</b>	JT/23/1: Establish a Just Transition Commission
<b>Planning</b>	CP/23/9: Establish a working group to examine implementation of climate actions in the National Planning Framework
<b>Carbon Pricing</b>	CP/23/4/A: Update shadow price of carbon
<b>Public Sector Lead</b>	PS/23/8/A: Publish report on capacity of public sector to deliver climate action identifying action areas
<b>Circular Economy</b>	CE/23/8/A: Introduce a new levy on disposable coffee cups

## 1.3 Overcoming delays to climate action delivery

Any delays in climate action implementation must be urgently overcome to meet legally binding emissions reduction targets at EU and national levels. Delivery delays in Q2 2023 are a particular cause for concern in the context of the [EPA emissions projections](#) released this quarter, as well as the [emissions estimates](#) for 2022.



Key reasons for delay cited by Departments in Q2 include the need for additional internal and external engagement (e.g. across EU, political, Departmental and/or Agency levels), action dependency issues (e.g. actions reliant on the finalisation of other reviews or structures to complete) and/or technical complexities slowing progress (e.g. related to IT, infrastructure or modelling). A handful of other actions experienced delays associated with the legislative system and/or related to capacity (e.g. issues of resourcing or re-prioritisation of work activity).

A number of actions experienced minor delays and are expected early in Q3, including the need for final Cabinet approval and/or concluding preparations towards the publication of reports. The 24 delayed actions from Q2 will carry forward for delivery and reporting in Q3 to maintain accountability to their completion.

Further detail on the high impact sectoral measures due for delivery in Q2 2023 is provided next. The sectoral share of GHGs in Ireland in 2022 provided in the infographic bubbles for each sector beneath are all inclusive of LULUCF (as per CAP23). Data on all reportable actions completed and delayed this quarter is contained at Appendix 1.

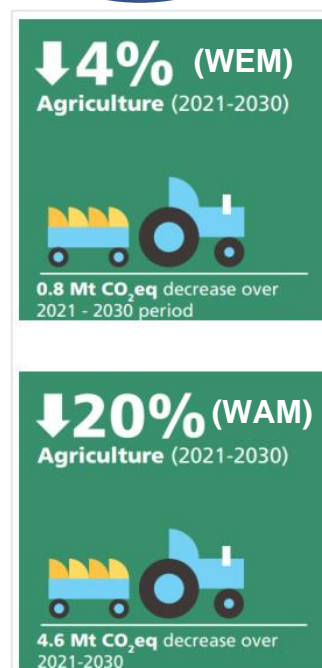
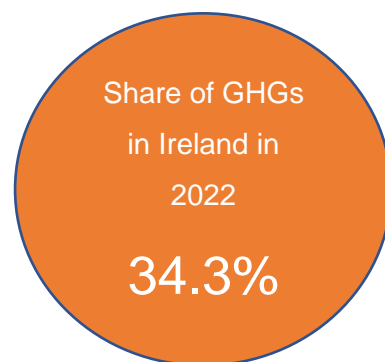
## 2 Agriculture

Agriculture is the largest GHG emitting sector in Ireland. Additional agriculture-related emissions also arise in the LULUCF sector from organic soils drained for farming uses (grasslands). Combined, emissions from agriculture and LULUCF account for c.45% of Irish emissions. Methane from livestock (enteric fermentation and manure management) accounts for c.68% of Irish agricultural GHGs.

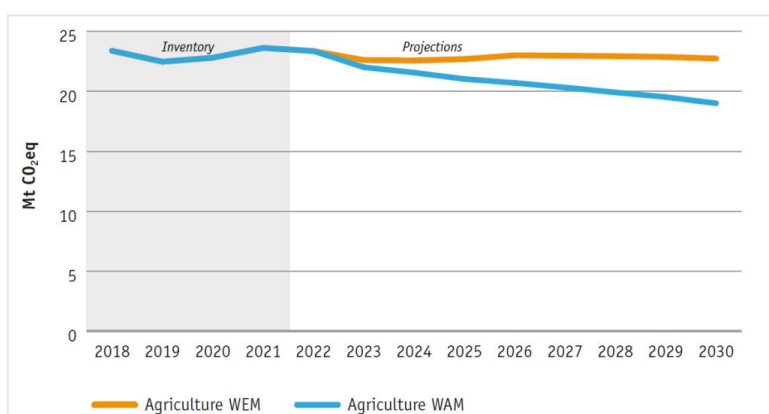
This quarter, the [EPA released its emissions projections](#) for all sectors. Total emissions from Agriculture are projected to decrease by 4 - 20% between 2021 and 2030 (Figures 1 and 2). Emissions reductions are projected from a variety of measures including fertiliser switching, limits on nitrogen fertiliser use and bovine feed additives, though sectoral targets and the Agriculture SEC are expected to be breached even with full implementation of these proposed measures.

Diversification measures proposed in CAP23 with annual savings of 1.5Mt CO<sub>2</sub> eq. by 2030 have not yet been included in the EPA analysis due to a lack of clarity on implementation pathways.

The significant range presented between “existing” measures (WEM) (4%) and “additional” measures (WAM) (20%) scenarios signals a need to move measures from currently ‘planned’ (WAM) to ‘being implemented’ (WEM) by firming up delivery pathways (e.g. timelines, resourcing, incentives/ disincentives etc). Further policy detail on important diversification measures is also crucial to be able to model their impact.



**Figure 1 Projected Agriculture emissions to 2030 (EPA, 2023)**



**Figure 2 Emissions projections for Agriculture, 2018 - 2030 (EPA, 2023)**

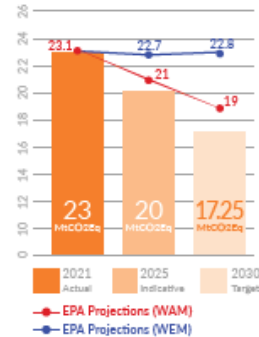


# Making Family Farms More Sustainable

## Key Performance Indicators / 2030 Targets



## Gap to Target



Q1

- ✓ Open Agri-Climate Rural Environment Scheme (ACRES)
- ✓ TAMS II Scheme for Low Emissions Slurry Spreading
- ✓ Launch grant scheme for on-farm solar panels



- ✓ Publish information to increase adoption of protected area
- ✗ Introduce a national fertiliser database

Q2

Q3

- Build national soils database – encourage farmers to take soil samples
- Deliver National Biomethane Strategy
- Establish implementation group for NESC recommendations on Just Transition in Agriculture

Q4

- Support production of legumes through Protein Aid Scheme
- Provide funding for multispecies and clover swards
- Launch Suckler Carbon Efficiency Programme
- Launch research call focused on slurry additives to reduce manure methane
- Launch research call on feed additives to reduce methane emissions
- €10m Tillage Incentive Scheme
- Establish Anaerobic Digestion pilot plant
- Financial support for farmers who convert to Organic Farming
- Encourage extensive livestock farming practices through eco-schemes
- Proposal for a cow reduction or an exit scheme



### ***High Impact Action Completed in Q2 2023: Agriculture***

**Did You Know?** Targeted Agriculture Modernisation Schemes (TAMS) provide grants to farmers to build and/or improve a specified range of farm buildings and equipment. This includes support for a number of climate action areas identified in CAP23, helping farmers to invest in solar power (AG/23/10/A), organic farming (AG/23/9), tillage (LU/23/5) and Low Emission Slurry Spreading (LESS) (AG/23/3). LESS helps farmers save money and emissions by enhancing nutrient recovery from slurries, improving nutrient use efficiency, and reducing dependency on chemical fertilisers.

**What's new?** The TAMS 3 LESS scheme opened to applicants on 8 May, with 45 applications received so far. LESS approvals, claims, and payments also remain ongoing under TAMS II, the predecessor to TAMS 3. €3.4 million has been spent on LESS under TAMS II in the year to date. For more information, and to apply to the scheme, please visit: <https://www.gov.ie/en/collection/0e509-tams-3/>

### ***High Impact Action Delayed in Q2 2023: Agriculture***

**Did You Know?** Action AG/23/1 under CAP23 aimed to establish a new National Fertiliser Database. This action was not completed on time in Q2 due to delays in completing the required legislative process through the Dáil. The intention is to launch the National Fertiliser Database in Q3.

**Why is it needed?** A National Fertiliser Database is a requirement under the 5th Nitrates Action Programme and aims to track fertiliser sales more accurately. It will help to provide a more realistic picture of where fertiliser is applied to land and minimise reporting requirements for farmers. This, in turn, will facilitate timely farmer payments under established eco-schemes. Reducing fertiliser nitrogen use is a key action under CAP23, proposed to save 0.5 – 0.65 Mt CO<sub>2</sub> eq in annual emissions by 2030.

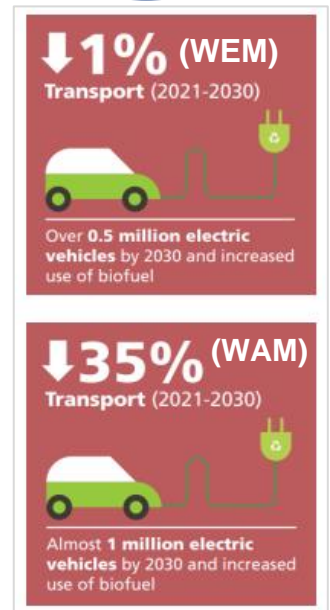
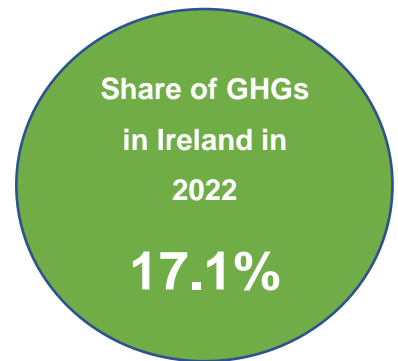
### 3 Transport

Transport is the second biggest greenhouse gas emitting sector in Ireland, accounting for 17.1% of GHGs in 2022. Transport emissions overall have had the largest increase of all sectors since 1990.

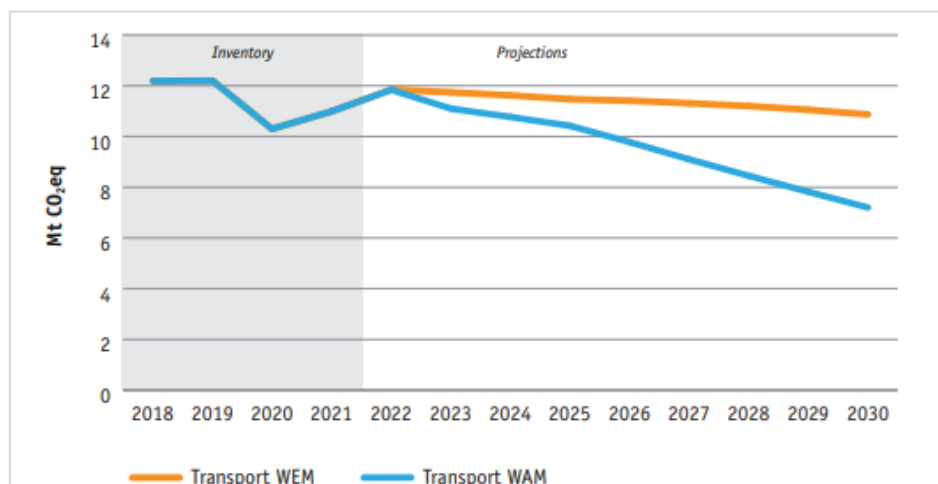
In [its projections](#) (Figures 3 and 4), the EPA estimates that emissions from transport will reduce by 1 - 35% between 2021 and 2030 depending on the range of measures implemented. As targeted in CAP23, the upper limit includes almost 1 million electric vehicles on the road, biofuel blends of up to 10% for petrol and 20% for diesel, as well as a 20% reduction in total kilometres travelled through better land use planning and modal shift from private fossil-fuelled cars to public transport, walking and cycling.

Transport in Ireland will require a multi-faceted approach to reduce emissions sufficiently to 2030 and 2050. Challenges remain, including pressures from a growing population as well as the potential for low fossil fuel prices. Transport is also still closely coupled with economic growth, with the EPA foreseeing increased freight emissions in the future without corrective action.

The EPA was able to model all proposed decarbonisation measures for Transport, though sectoral targets and the transport SEC are still expected to be breached. The focus remains on rapid implementation to bank emissions savings as early as possible.



**Figure 3 Projected transport emissions to 2030 (EPA, 2023)**



**Figure 4 Emissions projections for Transport, 2018 - 2030 (EPA, 2023)**



# Transforming How We Travel

## Key Performance Indicators / 2030 Targets

94,709  
Currently

940,000 EVs  
by 2030

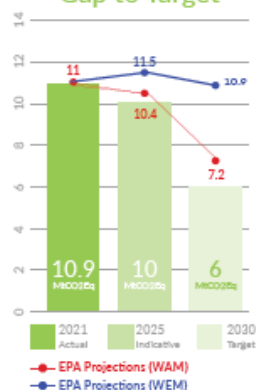
E10/B7  
Currently

E10/B20 biofuel  
blend rates by 2030

3.6% \*  
Currently

50% reduction in  
Transport fuel usage

## Gap to Target



Q1

No reportable actions for delivery this quarter



- ✓ National Sustainable Mobility Stakeholder Forum
- ✗ Publish National Cycle and Greenway Networks
- ✓ Continue implementation of biofuel blending

Q2

Q3

Progress Metropolitan Area Transport Strategies; public consultation on draft Galway Strategy  
Publish regulations on safe use of personal powered transporters  
Updated Renewable Fuels for Transport Policy Statement

Q4

\* Based on Fuel Excise Clearances data which provide a proxy for sales and the associated level of consumption



Establish Road Freight Forum and advance Road Haulage Strategy  
National Demand Management Strategy  
Advance rollout of 1,000km walking/cycling infrastructure by 2025  
Accelerate implementation of Safe Routes to School programme  
Advance BusConnects across Irish cities  
New town public transport services through NTA's 'Connecting Ireland' programme  
Advance Destination Charge Point Scheme for EVs  
Advance Local Authority Residential Charging Scheme  
Increase electric bus fleet procurement, including depot charging upgrades

### *High Impact Action Completed in Q2 2023: Transport*

**Did You Know?** Although there is an increasing shift to electric vehicles in Ireland, it will take some time for the entire national transport fleet to move from fossil fuels. In the meantime, increasing the biofuel blend rates in diesel and petrol is one way of reducing emissions from this sector.

**What's new?** Under Action TR/23/62, the [move to E10](#) in petrol (meaning up to 10% is made up of bioethanol) took effect on 1 July 2023. This followed a consultative process and an extensive public awareness campaign. The Department of Transport launched the second phase of the public awareness and information campaign print, radio, digital, and social media advertising, as well as information displays at forecourts in Q1, referring consumers to [www.gov.ie/E10](http://www.gov.ie/E10) for further information. The tailpipe emission savings from different renewable energy sources in transport in 2022 is estimated at over 0.7Mt CO<sub>2</sub>eq savings relative to 2018. The biofuel policy measures implemented in 2023 are expected to deliver a further 0.2Mt CO<sub>2</sub>eq GHG emissions savings relative to 2018.

### *High Impact Action Delayed in Q2 2023: Transport*

**Did You Know?** Action TR/23/30 under CAP23 sought the publication of a National Cycle and Greenway Network to help progress infrastructure rollout. The development of the National Cycle Network is substantially complete, but refinement of an accelerated delivery schedule is ongoing. This will require further consideration of the funding needed to enable the delivery schedule. This has impacted the Q2 delivery timeframe.

**Why is it needed?** Road transport is currently highly dependent on fossil-fuelled cars i.e., petrol and diesel. Shifting from this dependence to other forms of transport like public transport, walking and cycling will require behavioural change supported by viable, sustainable, and accessible alternatives. Active travel infrastructure will be part of the multi-faceted approach to reducing transport emissions. The National Cycle Network will inform the establishment of a coherent and coordinated network that integrates existing and proposed cycle routes linking urban centres across the country. It is intended that the National Cycle Network will be submitted to Government in Q3 with publication then expected to take place.

## 4 Electricity

Energy industries (primarily power generation) accounted for 14.4% of national emissions in 2022. Renewables accounted for 39% of electricity generated in 2022, a 4% increase on the previous year.

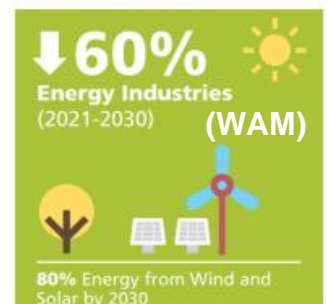
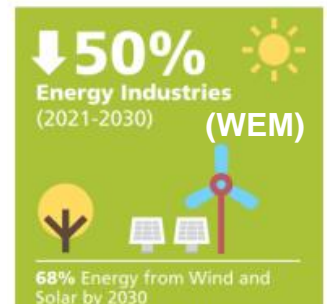
In its [projections released this quarter](#), the EPA report that increased renewable energy generation from wind and solar, if delivered rapidly as planned, can reduce energy industry emissions by 50-60% and achieve over 80% renewable electricity generation by 2030 (Figures 5 and 6). Increased interconnection, storage and biomethane are also envisaged to contribute to reduced sectoral emissions, though the sector is still predicted to breach its sectoral targets and SEC.

Continued dependency on coal use due to unavailability of sufficient gas-fired generation creates risks to targets, along with energy risks arising from recent geopolitical events and the slow implementation of renewable electricity infrastructure.

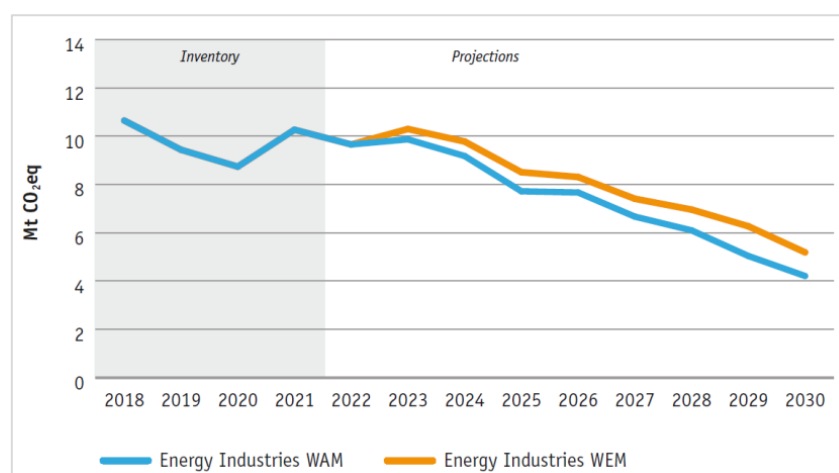
The EPA was unable to model the full 2GW target for new flexible gas fired generation targeted in CAP23, though report that the targeted 80% renewables share could be achieved with lesser GW targets across key renewables areas. Hydrogen generation post-2030 and demand side measures to mitigate growth from large energy users were also not included in the projections due to a lack of clear implementation pathways.

Share of GHGs  
in Ireland in  
2022

14.4%



**Figure 5 Projected energy industry emissions to 2030 (EPA, 2023)**



**Figure 6 Emissions projections for energy industries, 2018 - 2030 (EPA, 2023)**





# Powering Renewables

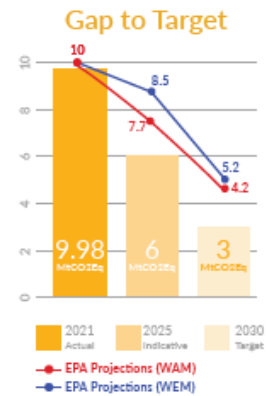
## Key Performance Indicators / 2030 Targets



80% electricity from renewable sources by 2030



9GW onshore wind by 2030



Q1

- ✓ Publish System Services Future Arrangements Phase III



- ✓ Small-scale generation scheme design
- ✓ Plan for the delivery of Offshore Renewable Energy
- ✓ Irish Ports ORE Delivery Framework
- ✗ Updated interconnection policy
- ✓ Supports for community participation in electricity demand flexibility

Q2

Q3

- Renewable Electricity Spatial Policy Framework
- MARA start consenting processes
- Policy framework for electricity storage
- Onshore and offshore RESS auctions

Q4



- Clean Export Premium feed-in tariff implementation plan
- New draft onshore wind energy guidelines
- Regular connection offers for renewable electricity
- Regional Renewable Electricity Roadmap
- Private wires public consultation
- Regulatory review of storage (licensing/charging/market incentives)
- Electricity Demand Side strategy and action plan
- Enhanced reporting framework for large energy users

### *High Impact Action Completed in Q2 2023: Electricity*

**Did You Know?** The [Offshore Renewable Electricity Support Scheme](#) (ORESS) is an auction-based process which invites renewable energy projects to compete against each other, by bidding as low as possible, to win contracts to provide electricity for a twenty-year period. Dedicated auctions are initially required to support Offshore Renewable Energy technology in Ireland due to the scale and nature of offshore wind farms.

**What's new?** Under Action EL/23/10B, [final results](#) of the [ORESS 1 Auction](#) were published on 14 June and Notices of Award issued on 21 June, as per the scheduled auction timetable. The outcome of the auction provides a route to market for in excess of 3GW from four offshore wind projects, to be operational by 2030 at the latest. This is equivalent to meet over a third of Ireland's entire electricity consumption this year and enough to power over 2.5 million homes. The next step for the 4 successful projects is to seek planning approval from An Bord Pleanála and then commence construction.

### *High Impact Action Delayed in Q2 2023: Electricity*

**Did You Know?** There is strong Government support for increasing electricity interconnector capacity between Ireland and neighbouring markets. There are many benefits of interconnection including for Irish energy security, integration of variable renewables, competitiveness, and sustainability.

**Why is it needed?** An updated Interconnection Policy to reflect Ireland's increased climate and energy ambition, the revised EU TEN-E Regulation, Brexit challenges and the increased significance of hybrid interconnectors was due for publication in Q2 2023 under Action EL/23/16. Although it did not complete in Q2, substantial work has taken place and, subject to Cabinet approval, publication is intended in July.

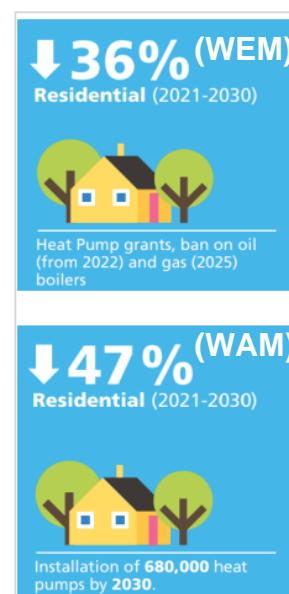
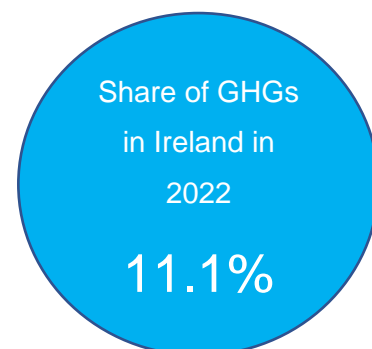
## 5 Buildings

Emissions from buildings, including homes, commercial premises and public buildings, made up 11.1% of Ireland's emissions in 2022. Most of this (9%) was from residential buildings. Energy prices, average yearly temperatures, energy efficiency measures, fuel switching and remote working have all influenced emissions from buildings of late.

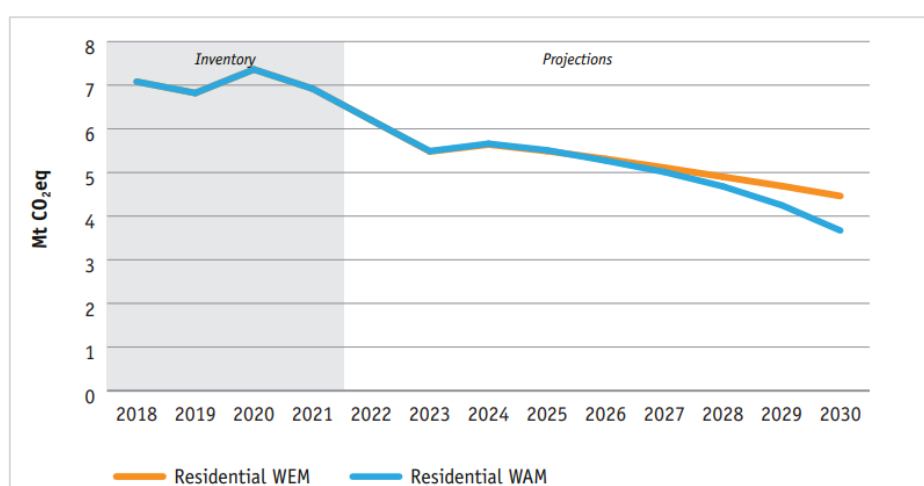
In [the recent EPA projections](#), emissions from residential buildings are set to decrease by 36 - 47% between 2021 and 2030 (Figures 7 and 8). The higher reduction level assumes, among other actions, a ban on oil and gas boilers in new dwellings, the installation of 680,000 heat pumps, the continued rollout of household retrofit activity including 500,000 B2 retrofits/cost optimal equivalents, and the implementation of full district heating and biomethane targets to decarbonise heating sources.

In percentage terms, with full implementation of ambitious CAP23 measures, residential and commercial buildings are the only sectors expected to meet emissions reduction targets for 2030. Cumulative emissions however mean that the commercial buildings SEC will be breached, though the residential SEC is projected to remain within limits in the second carbon budget period.

For Commercial and Public Services, a decrease of 19 - 49% is projected (Figures 9 and 10). Accelerated retrofitting of both public and commercial buildings is required, along with district heating and biomethane use.



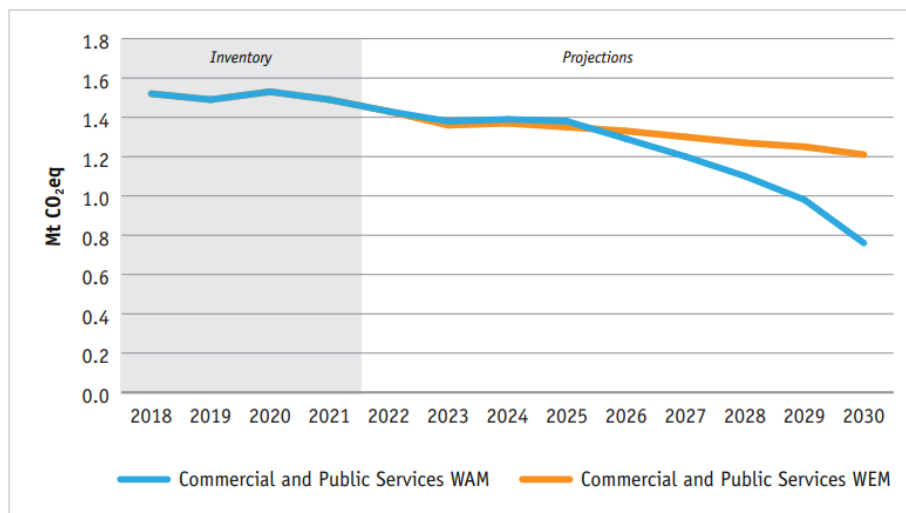
**Figure 7 Projected emissions from Residential sector (EPA, 2023)**



**Figure 8 Emissions projections for Residential sector, 2018 - 2030 (EPA, 2023)**



**Figure 9 Projected emissions from Commercial and Public Services (EPA, 2023)**



**Figure 10 Emissions projections for Commercial and Public Services, 2018 - 2030 (EPA, 2023)**

### **High Impact Action Completed in Q2 2023: Buildings**

**Did You Know?** The [National Retrofit Plan](#) sets ambitious targets to improve energy use in Irish housing and reduce residential sector emissions. Retrofitting will also improve the health and comfort of a home and reduce energy bills. However, it requires significant investment from both homeowners and the State to do this. This can be a challenge, particularly with the national target of upgrading at least 500,000 homes by 2030.

**What's new?** A “net of grant” option is now in place for homeowners under Action BE/23/5/A. Under the grant scheme for individual home energy upgrades (e.g. attic insulation, heating controls, solar panels) homeowners can assign the grant payment to their registered contractor, allowing the homeowner to only pay the balance of installation costs. Under the National Home Energy Upgrade scheme for upgrades to B2 (multiple energy upgrades in one go), [One Stop Shop](#) contractors will discount the grant from the total works for the homeowner. This action will make retrofitting more accessible as homeowners will not be required to pay the entire upfront cost.



## Building Better

### Key Performance Indicators / 2030 Targets

8,889  
Currently

400,000 heatpumps  
in existing homes  
by 2030

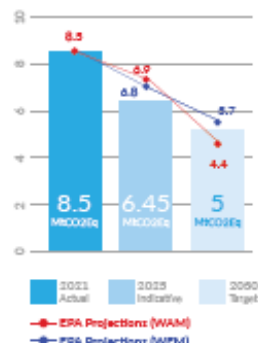
28,661\*  
Currently

500,000 B2  
Retrofits by 2030

0  
Currently

2.5TWh of district  
heating by 2030

### Gap to Target



Q1

- ✓ Implement Energy Efficiency Obligation Scheme
- ✓ Tax incentive for small scale landlords to encourage retrofitting
- ✗ Implement District Heating Steering Group recommendations



- ✓ Introduce 'net of grant' energy upgrade option for homeowners
- ✗ Geothermal Policy Statement
- ✓ Heat and Built Environment Delivery Taskforce Implementation Plan
- ✗ Launch new retrofit scheme for SMEs

Q2

Q3

- Review of cost optimal performance requirements for building regulations
- Low-cost loans available for home retrofit
- Increase number of registered retrofit providers and BER assessors
- National Heat Policy Statement
- Roadmap for retrofit of the commercial building stock
- Develop guidelines on retrofitting traditional/historic buildings

Q4

\*The KPI for residential retrofit is the equivalent of 500,000 homes to a BER B2/cost optimal by 2030. This graphic shows the number of B2s delivered but does not include the impact of non-B2 retrofits. For further information please refer to the SEAI Home Energy Upgrades annual report and the National Retrofit Plan



- Accelerate delivery of green skills apprenticeships
- Roadmap to phase out fossil fuel heating systems in all buildings
- Report on split incentives for rental properties
- Promote statutory requirements for installation of building automation systems
- Enhanced budget for home and community retrofit grants and schemes
- Make aggregated retrofit project supports available
- Increase budget for SEAI Warmer Homes scheme – 6,000 free upgrades
- Deliver retrofits to approx 2,400 Local Authority Homes
- Accelerate delivery of Dublin District Heating Scheme
- Rollout of solar panels on all schools
- Rollout of Pathfinder Programme for cost effective public sector retrofitting

### *High Impact Action Delayed in Q2 2023: Buildings*

**Did You Know?** Action BE/23/31/B under CAP 23 aimed to launch a new non-domestic retrofit scheme aimed at small- and medium- sized enterprises (SMEs) to provide a tailored pathway to support retrofit activity in local businesses. This action has been delayed for Q2 due to the IT support system for the scheme not being complete on time.

**Why is it needed?** There are currently a [variety of supports for businesses](#) in retrofitting their premises and moving away from fossil fuel-based heating e.g., through funding and services such as energy audits, technical support, training, and advice. However, given the increased climate action ambitions in the buildings sector (and all sectors), more targeted schemes will be required to meet 2030 emissions reduction targets as this action could help support.

## 6 Land Use, Land Use Change and Forestry

Land Use, Land Use Change and Forestry (LULUCF) has been an emissions source in Ireland since 1990. Using current emissions factor estimates, land uses emitted c.7.3Mt CO<sub>2</sub> eq in 2022, more than the emissions from residential buildings.

The main emissions source reported in 2021 in LULUCF was from grasslands on drained organic soil (e.g. used for grazing cattle). Despite only representing c.8% of grasslands in the country, they were responsible for over 80% of reported emissions from drained peatlands (excluding forested peatlands). Science continues to evolve to better estimate and understand emissions from the LULUCF sector, which may lead to inventory changes in the future.

Forestry on organic / peat soils can also create emissions, as can degraded wetlands (e.g. bogs that have been drained for peat extraction). Sources are offset somewhat by removals of CO<sub>2</sub> from the atmosphere through forests on mineral soils, active (wet) bogs and Harvested Wood Products.

In the [EPA projections](#), emissions from LULUCF are predicted to increase to 2030 as our forestry reaches harvesting age and changes to a carbon source. Planned policies and measures are projected to reduce the extent of the emissions increase. The EPA highlights the importance of increased afforestation, water table management on agricultural organic soils and peatland rehabilitation to revert current emissions sources to net sinks and to counteract the impact of expected forest harvesting.

Share of GHGs  
in Ireland in  
2022

10.7%

↑ **32%**  
**WEM**

↓ **2%**  
**WAM**

Figure 11 Projected LULUCF emissions to 2030 (EPA, 2023)

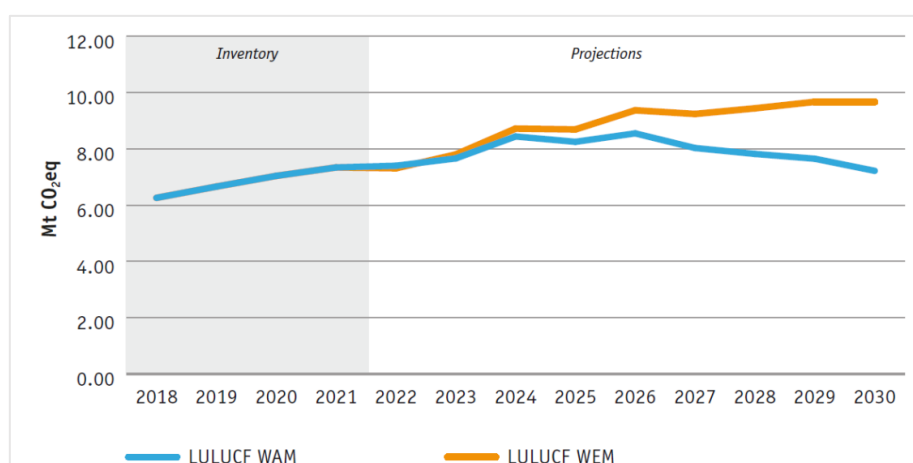


Figure 12 Emissions projections for LULUCF, 2018 - 2030 (EPA, 2023)



## Changing Our Land Use

### Key Performance Indicators / 2030 Targets

2,273  
Currently

8,000ha per annum  
afforestation  
by 2030

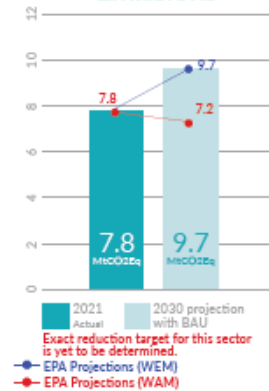
–  
Currently

80,000 ha reduction  
in organic grassland  
intensity by 2030

13,995  
Currently

77,600 ha  
peatland rehabilitated  
by 2030

### Unabated LULUCF Emissions



Q1

- ✓ Provide financial support to farmers to increase the number of hedgerows and trees on farms
- ✓ Cover crop measure included in CAP Strategic Plan
- ✓ Financial supports to improve carbon sequestration on mineral grasslands
- ✓ Impose mandatory carbon sequestration requirements under Nitrates Derogation
- ✓ Financial supports to reduce management of grasslands on drained organic soils
- ✓ EU Just Transition funding for research and knowledge transfer
- ✓ Phase 1 of Land Use Review
- ✓ Commencement of Phase 2 of Land Use Review



Adoption of tree planting and management measures under new Forestry Programme



Launch capital supports for tillage equipment



Capital supports for mineral grassland management equipment

Q2

Q3

No reportable actions for delivery this quarter

Q4



Continued funding of Straw Incorporation Measure

GHG towers installed on mineral and organic grasslands

Restoration and rehabilitation of Bord na Móna peatlands

Establish Peatland Finance Ireland

NPWS restoration on protected raised and blanket bogs

Land Use Review Interim Reporting



### *High Impact Action Completed in Q2 2023: LULUCF*

**Did You Know?** As detailed in the Agriculture chapter, TAMS provide grants to farmers to help build and/or improve farm buildings and equipment, supporting climate action at farm level. The improved management of grasslands on mineral soils is an area jointly targeted by TAMS and CAP23. Soil type matters when it comes to determining if a grassland acts as a sink or source of emissions. Grasslands on mineral soils, which constitute 92% of grasslands, are currently estimated to sequester c.2Mt of carbon, acting as an important sink to partially offset emissions sources elsewhere, including from grasslands on organic soils.

**What's new?** A range of pasture management equipment have now been included in the [TAMS 3 investment list](#) under Action LU/23/7A (e.g. soil aerators, mulchers, GPS fertiliser application and Precision Grass Measuring Equipment). These investments contribute to more efficient management of mineral soil grasslands which can improve carbon sequestration. This includes by avoiding soil compaction, increasing reseeding interval (thereby reducing the need for ploughing), the inclusion of clover/legumes to reduce fertiliser dependence and overall improving the efficiency of production.

### *High Impact Action Delayed in Q2 2023: LULUCF*

**Did You Know?** A new €1.3bn Forestry Programme 2023-2027 as due to be adopted and launched in Q2 2023 under Action LU/23/1. It has been delayed subject to State Aid approval from the EU Commission, which was formally submitted to in April 2023. The Programme also remains subject to an ongoing Strategic Environmental Assessment.

**Why is it needed?** The new Forestry Programme will introduce new afforestation measures and increased financial supports to incentivise tree planting. Its adoption is critical to allow landowners and farmers access to the generous supports available and put us on a trajectory to increasing planting rates to at least 8,000ha/annum. Without it, new afforestation licence applications remain considerably low, with only 133ha so far afforested in 2023 according to the [DAFM Forestry Dashboard](#). Further delays therefore place afforestation targets and longer-term climate neutrality in jeopardy.

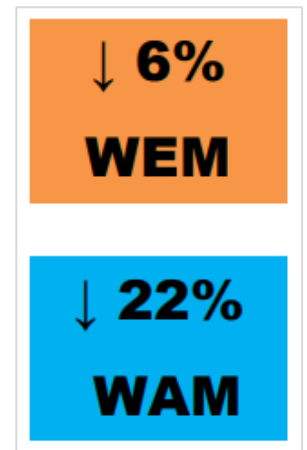
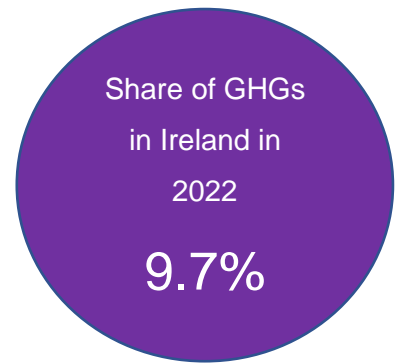
## 7 Industry

Industrial emissions accounted for 9.7% of Ireland's total emissions in 2022, with manufacturing combustion and industrial processes as the key emissions sources. These emissions are largely affected by cement production in Ireland, with emissions increasing, for example, in times of economic boom and when Covid-19 restrictions relaxed.

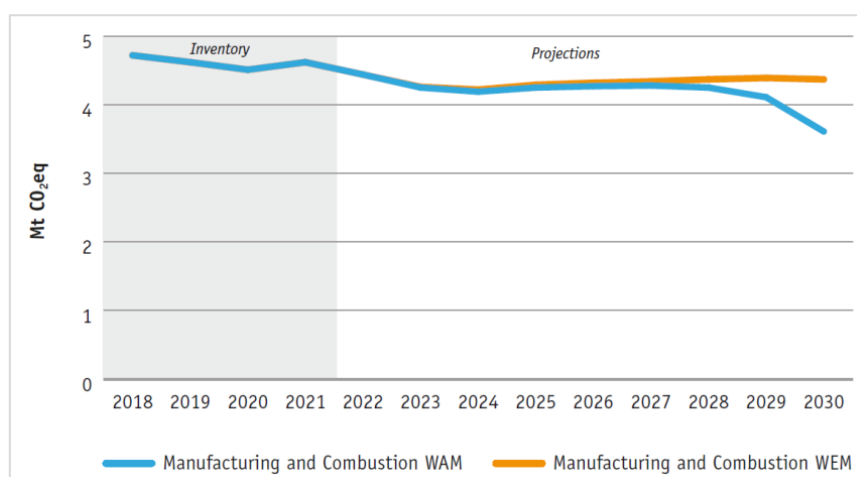
This quarter, [the EPA projects](#) that manufacturing combustion emissions will reduce by 6 - 22% from 2021 to 2030 with the implementation of efficiency measures and renewable heat generation in industry (Figures 12 and 13). The full implementation of biomethane targets (with use split across heating in buildings and industry) is also required to meet the upper end of this range.

Meanwhile, process emissions are projected to increase by 5% in the same time period under the EPA's WEM scenario due to anticipated increased cement production (Figure 13). There is no WAM scenario for process emissions as no additional measures are yet identified to address them.

The EPA were unable to model the full CAP23 targets for renewable heating in industry nor measures aimed at decreasing embodied carbon in construction materials due to unclear implementation pathways. The use of Carbon Capture and Storage in industry post-2030 was also not included for the same reason. The Industry SEC is thus expected to be breached by quite a significant margin according to the EPA, without better defined emissions reducing pathways.



**Figure 13 Projected manufacturing combustion emissions to 2030 (EPA, 2023)**



**Figure 14 Emissions projections for manufacturing combustion, 2018 - 2030 (EPA, 2023)**



## Greening Industry

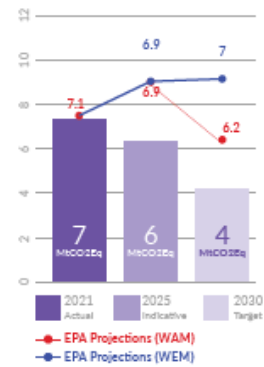
### Key Performance Indicators / 2030 Targets

9% \*

Currently

70-75% share carbon neutral heating by 2030

Gap to Target



Q1

No reportable actions for delivery this quarter



Develop roadmap for green hydrogen



Q2

Q3

Industry inputs to National Biomethane Strategy

Determine the best energy efficiency measures for Large Industry Energy Network

Technical guidelines on low carbon construction methods for public bodies

Q4

Continued rollout of Green Transition Fund

Annual Review of Support Scheme for Renewable Heat

Decarbonisation roadmap for industrial heat

Feasibility assessment of carbon capture storage

Public procurement policy re low carbon construction

Report on actions to decrease embodied carbon in construction



\* Recalculated compared to the data provided in the Q1 2023 progress report.

### *High Impact Action Completed in Q2 2023: Industry*

**Did You Know?** Decarbonised gases such as [green hydrogen](#) are a critical component for Ireland's energy transition. Hydrogen is envisioned to play an important role in decarbonising industrial processes, long duration storage of renewable energy, and as a transport fuel in hard-to-abate sectors such as heavy goods transport, maritime and aviation. CAP23 includes offshore wind targets of at least 5GW to be operational by 2030, with green hydrogen in production from surplus renewable electricity. 2GW of offshore wind is specifically targeted for green hydrogen production post-2030.

**What's new?** The National Hydrogen Strategy was developed and submitted for government approval in Q2 2023. The Strategy covers the whole hydrogen value chain including production, transportation, storage, end uses, safety, markets, regulation, research, innovation and skills. The Strategy will provide clarity to the public and industry in respect of the long-term role that renewable hydrogen can play in our energy system out to 2050. It will also establish short-term actions that should be progressed to enable the industry to be established over the coming years.

### *High Impact Action Completed in Q2 2023: Industry*

**Did You Know?** While falling under the Electricity chapter, the support scheme for [Small-Scale Generation](#) aims to provide an easier route to market for community renewable energy projects, including for SMEs, farmers and industrial entities that may be seeking to electrify their manufacturing combustion processes. The scheme fills a gap in tariff-based supports between the smaller Micro-generation Support Scheme and the larger RESS auctions. Small-Scale Generation targets renewable electricity generation greater than 50kW, but smaller than typical commercial generators.

**What's new?** The high level design for the [Small-Scale Renewable Electricity support Scheme](#) published in Q2 2023 under Action EL/23/13/A. It is crucial to maximise commercial and industry participation in the renewable energy transition and can help to further decarbonise manufacturing combustion processes while saving businesses' money on energy bills previously reliant on imported fossil fuels.