



Comhairle Cathrach na Gaillimhe
Galway City Council

GALWAY CITY CLIMATE ACTION PLAN

SUMMARY REPORT

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Glossary of terms:

More information in relation to commonly used climate action terms is available at [Climate Ireland](#).

1.0 Introduction

Through the Climate Action and Low Carbon Development (Amendment) Act 2021, Ireland is now on a legally binding path to net-Zero emissions no later than 2050, and to a 51% reduction in emissions by the end of this decade. The Act provides the framework for Ireland to meet its international and EU climate commitments and to become a leader in addressing climate change.

In July 2023, the Irish Government set maximum limits on greenhouse gas emissions for each sector of the Irish economy up to 2030.

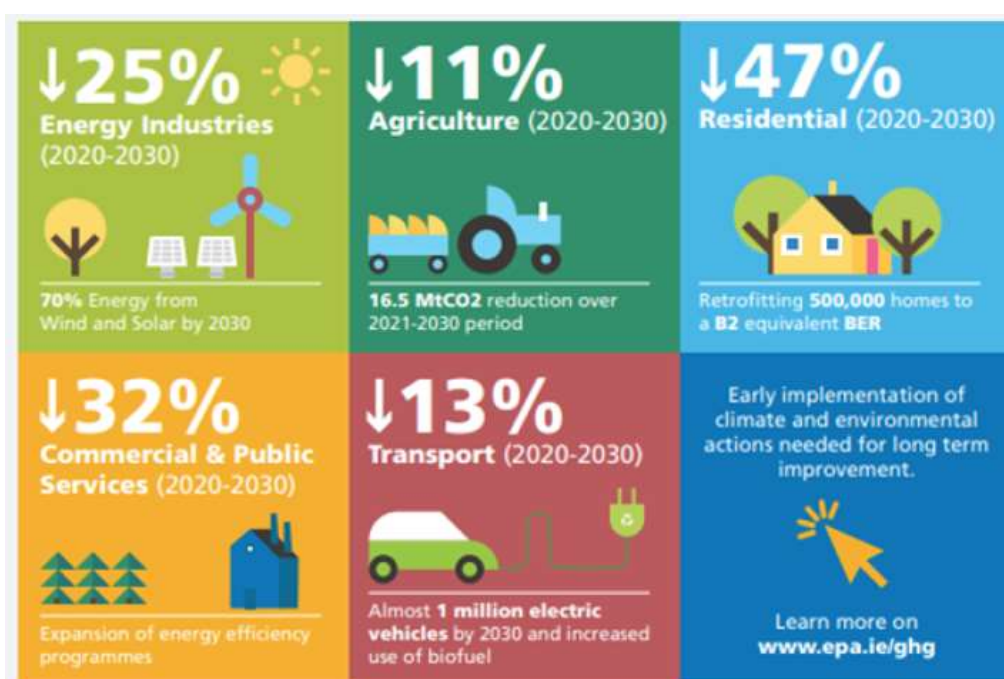


Table 1: 2030 Sectoral Emission Targets relative to 2018 levels

Achieving these targets will be challenging and will require fundamental changes in many parts of Irish life. In rising to the challenge, we will be able to improve the health, welfare and security of all our people, while also protecting our environment and delivering new opportunities in terms of employment and competitiveness.

As required by the 2021 Act, Galway City Council is preparing the first Local Authority Climate Action Plan (LA-CAP) which must be adopted by the Elected Members before 23rd February 2024. As part of preparing this plan, Galway City Council is now at pre-draft public consultation, with the goal of understanding the current issues and opportunities for residents/businesses and all other stakeholders within the city.

1.1 Local Authority Climate Action Plans (LA-CAP)

Local Authorities will have a particularly important role in the delivery of both climate mitigation and adaptation. This is reflected in the provisions of the Climate Action and Low Carbon Development (Amendment) Act, 2021, which requires each Local Authority to prepare a (LA-CAP), specifying the mitigation and the adaptation measures to be adopted by the Local Authority.

Local authorities are key drivers in advancing climate policy at the local level and our LA-CAP aims to strengthen the alignment between national climate policy and local circumstances with the prioritisation and acceleration of evidence-based measures, to assist in the delivery of the climate neutrality objective for Galway City.

Galway City Council is taking a range of actions across all functions and services to tackle climate change and is uniquely positioned to provide robust leadership in climate action.

In order to ensure that our LA-CAP is centred around a strong understanding of the role and remit of Galway City Council on climate action, the Plan is being developed through the following framework.

- **Full accountability:** Targeted actions for areas where Galway City Council has full accountability for climate action within our operations.
- **Influence:** Through the functions and services we provide, we will seek to influence businesses, communities, and individuals to deliver local climate action.
- **Coordination:** We will develop actions to support the coordination and facilitation of local and community action, bringing together stakeholders to achieve climate action-related projects.
- **Advocate:** We will look to promote climate action through raising awareness, communication, informing and engaging with the people of Galway.

While the Climate Action Plan will be ambitious to reflect the leadership role of Galway City Council on climate action, the Plan can only include actions that fall within the role, remit, and governance of the Council.

1.2 Development of the LA-CAP

The development of the Climate Action Plan will follow a number of stages as explained in the graphic below.



1.3 Consultation during the Plan Making Phase.

Galway City Council is looking to draft the LA-CAP in partnership with stakeholders and is looking for your input to help us devise a plan that will facilitate and enable effective climate action at a local and community level.

Submissions can be made online or by post. All submissions must be received by the **8th of September 2023**. Everyone is welcome to make a submission.

- To make a submission online, please go to: [GalwayCity - Galway City Council Climate Action Plan](#)
- You can also post your written submission to:

Galway City Council,
Climate Change Department,
City Hall,
College Road,
Galway, H91 X4K8

The context of the submissions may be published as part of the plan-making process but no contact information or private details will be recorded. At all times, Galway City Council will comply with [GalwayCity - GalwayCity.ie Privacy Statement](#).

You can keep up to date on the progress of our Climate Action Plan through [GalwayCity - Galway City Council Climate Action Plan](#) section of our website.

1.4 Our Vision and Mission Statement

Our Plan will have a Vision and Mission Statement to unite all key stakeholders and inspire action.

A Vision Statement sets out where we are going and what it will look like when we get there. A Mission Statement is action focussed and sets out how we will deliver this Vision.

Our proposed Vision for Galway City is:

**“To be a Climate Resilient, Biodiversity Rich,
Environmentally Sustainable and Carbon Neutral city by
no later than the end of 2050.”**

The Vision for our Plan recognises Galway City Council’s pivotal position to deliver on national policy at community level. The Vision is therefore supported by a number of key strategic goals:

Strategic Goal 1:

Fostering Governance, leadership and Partnership for Climate Action

Strategic Goal 2:

Achieve Carbon Emission and Energy Efficiency Targets for 2030 and 2050

Strategic Goal 3:

Deliver on Climate Adaptation and Climate Resilience

Strategic Goal 4:

Mobilise Climate Action in local Communities

Strategic Goal 5:

Mobilise Climate Action in Enterprise and support Transition to an Inclusive, Net Zero and Circular Economy

Strategic Goal 6:

Achieve a “Just Transition” particularly for Communities that may be Economically Disadvantaged by Decarbonising projects.

Our indicative Mission Statement is:

**“To deliver transformative change and measurable
climate action within our own organisation and services
and across Galway City, through leadership, example
and mobilising action at a local level.”**

2.0 The Challenge

2.1 Climate Change

Our climate is changing in a manner consistent with global trends. We are experiencing warmer temperatures, with the past 8 years the hottest on record. As a result of higher average temperatures, we are also experiencing more intense weather events including droughts, storms, heavier rainfall, and stronger winds resulting in higher vulnerability and risk to the negative impacts of climate change within Galway City.

To tackle climate change, we need to reduce and remove the level of greenhouse gases entering and already in our atmosphere. In addition, we must further increase our resilience to current and future climate change impacts. As part of global and national efforts, we must meet the National Climate Objective 2050.

Our Climate Action Plan will set out how the local authority aims to achieve its role within the National Climate Objective over the next 5 years and beyond toward 2050. It will act as a key instrument that strengthens the links between national and international climate policy and the delivery of effective climate action at local and community levels, through place-based climate action.

Galway City Council is very active in adapting and building resilience to the impacts of climate change for example through flood defence schemes, planning, risk assessment and maintenance and strengthening of infrastructure. To increase this resilience, Galway City Council will need to proactively plan for and work with our communities and government agencies to adapt to the current and future climate change risks identified.

2.2 Local Climate Risks

In line with global trends, it is forecast that the frequency and intensity of some hazards (e.g., coastal, river and pluvial flooding, coastal erosion, heatwaves and drought) will increase while others will remain the same (e.g., severe windstorms). These changes are projected to continue and intensify with a wide range of impacts for Galway City and Galway City Council. Galway City will also change in terms of its

population and developments which will potentially affect the exposure and vulnerability of people and assets within the city.

Galway City Council developed a Climate Risk Assessment to assess the current and future climate risks for Galway City which can be viewed [GalwayCity - Galway City Council Climate Action Plan](#).

Climate adaptation involves taking action to prepare for and adjust to the current and future impacts of climate change. Understanding the risks posed by climate is an essential first step for Galway City Council to develop effective and efficient adaptation actions in response to current and projected climate change. Climate change risk assessments identify the likelihood of future climate hazards and their potential impacts. This is fundamental for informing the prioritisation of climate action and investment in climate action.

The Risk Assessment was developed on the basis of the most-up-to-date climate projection data available at the time of writing. The underlying models are updated on a regular basis and the level of risk may increase as a result. Other indirect risks, while not part of this Risk Assessment, should be noted, such as forced migration of populations, increases in vector-borne disease and disruption of supply chains.

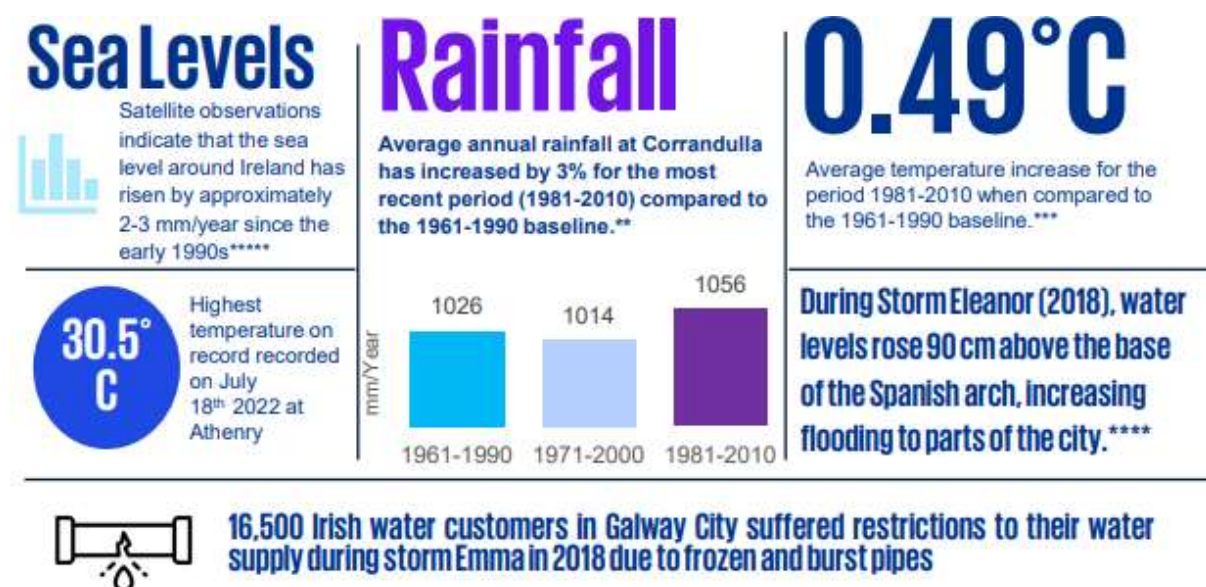


Figure 2.1: Observed Climate Changes for Ireland and Galway City

2.2.1 Recent Extreme Weather Events in Galway City

- Recent experiences of river and pluvial flooding events in 2020 and 2021 demonstrated the wide range of impacts for Galway City. These impacts included damage to residential properties, closure of businesses, disruption to public services and closure of transport networks. Projected increases in the frequency of extreme precipitation events will result in increased surface water and riverine flood risk for Galway City.
- Galway City experiences coastal erosion and coastal flooding events on a common basis, with recent events in 2021 and 2022 resulting in disruption of transport networks and damage to coastal habitats. Projected sea level rise will increase the frequency of coastal inundation and erosion events and associated impacts.
- Heatwaves and droughts have contributed to the imposition of restrictions on water supply, damage to road surfaces and have placed an increased demand on recreational areas.
- Recent experiences of cold spells and heavy snowfall events in 2018 and 2022, demonstrated the wide range of impacts for Galway City. These included, amongst others, disruption to public transport networks and road closures. Projected increases in average temperature and decreases in the frequency of snowfall indicate a decrease in the frequency of cold spells, heavy snowfall, and their associated impacts.

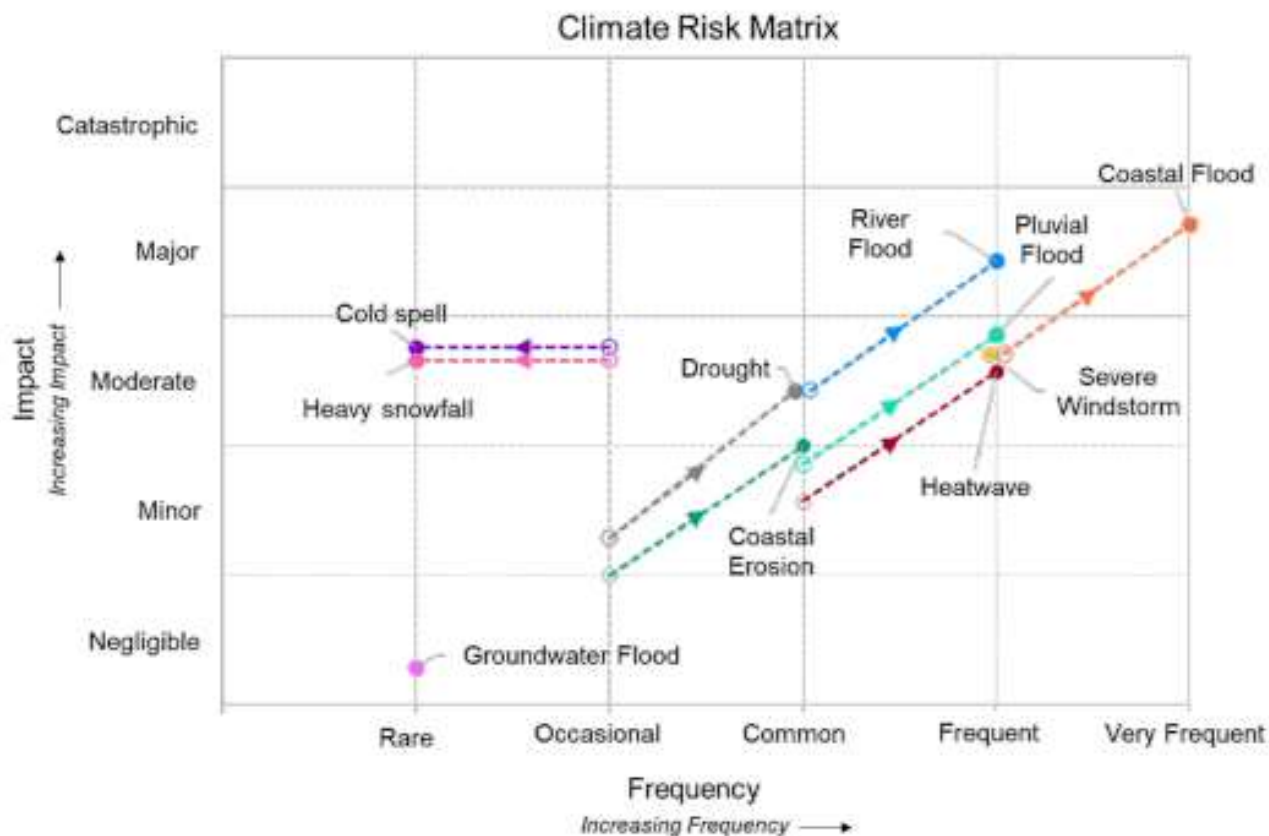


Figure 2.1.1: Climate risk matrix showing the future change in risk with the hollow marker showing the current risk and the solid marker the future risk. The dotted line shows the change between the current and future risk.

2.3 Local Greenhouse Gas Emissions Profile

Understanding where our GHG emissions are coming from at a local level provides an evidence base for developing our Climate Action Plan and appropriate actions that are meaningful for the local context.

Galway City Council has prepared a Baseline Emission Inventory Report based on local and national data from 2019, on energy production and consumption and other GHG emissions in Galway City, including insights into Galway City Council's own emissions. The summary findings of the report are presented in the figure below with a comparison against the National baseline with more detail available on the report which can be accessed [GalwayCity - Galway City Council Climate Action Plan](#).

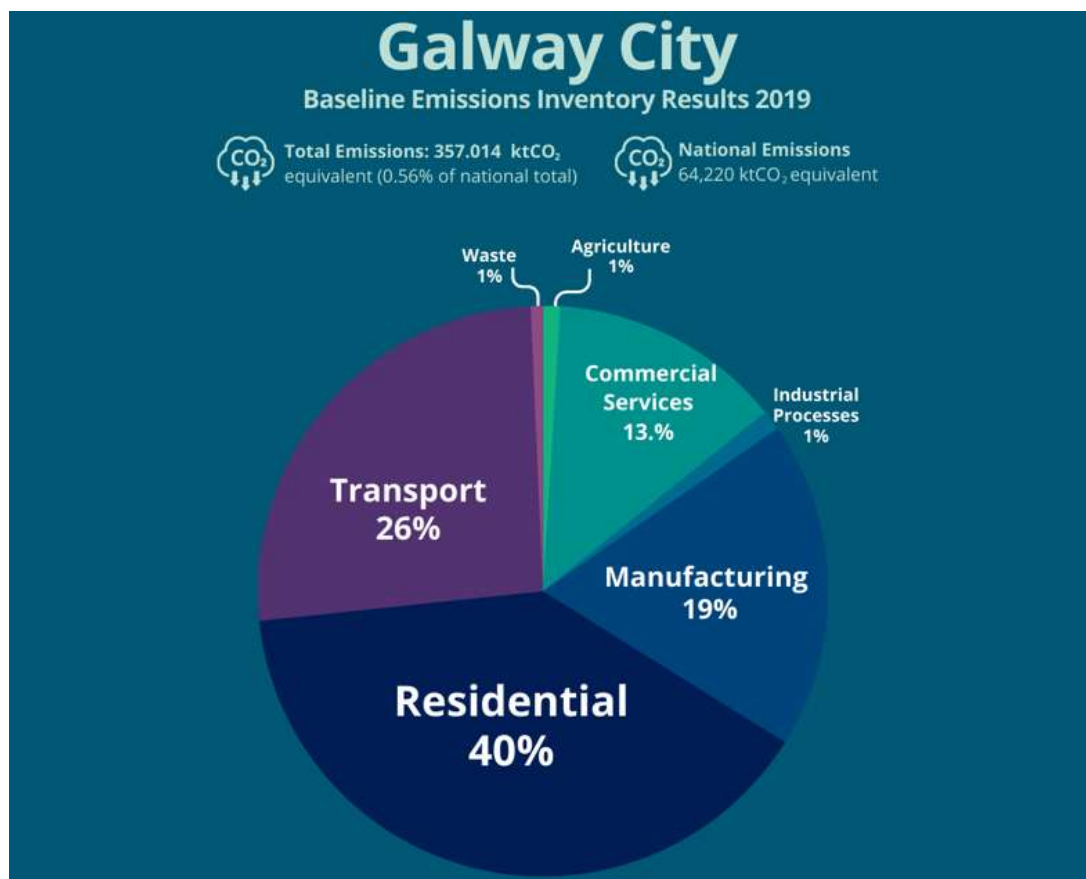


Figure 2.2: Baseline Emission Inventory for Galway City

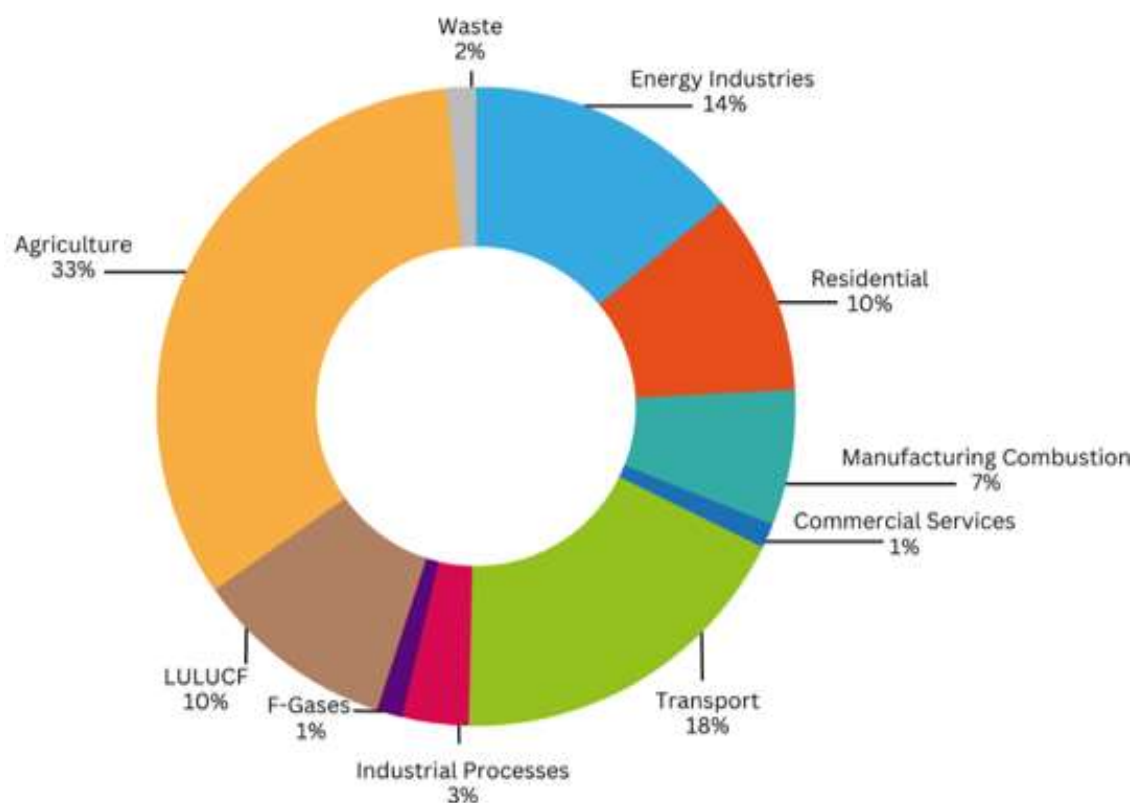


Figure 2.2.1: National Emissions Inventory (2019)

3.0 Climate Action

Galway City Council has for some time been actively implementing a range of actions across a range of various functions and services to tackle climate change. This is in addition to the many and important climate actions led by local communities and businesses throughout the City. Such actions include:

- **Active Travel** includes walking, cycling and represents a significant opportunity to advance sustainable modes of transport and reduce the associated GHG emissions. Multiple Active Travel projects have been implemented in the city to date.
- **Retrofitting** our own public buildings and social housing stock, including the removal of fossil fuel systems and installation of renewable energy systems.
- **Supporting communities** through various funding programmes and partnerships. This will be expanded through the Community Action Fund (approx €750,000 for Irish communities over the next 18 months).

3.1 Climate Action: Our Homes and Buildings

Emissions from our Homes covers GHG emissions from space and water heating, as well as from electricity consumption. There are also non-energy emissions in our Homes, such as from food, waste, shopping and other household-related factors that are not included in this category.

Climate Action, like many things, begins at home. We spend much of our time there and we would all like them to be as comfortable and efficient as possible. All homes use electricity and most of the homes in Galway City use fossil fuels for space and water heating.

At a national level, the Residential sector accounts for about 10% of total energy-related emissions, with the average dwelling emitting 5 tCO₂ (tonnes carbon dioxide) per annum¹.

¹ <https://www.seai.ie/publications/Energy-in-Ireland-2020.pdf>

At a local level, the energy and emissions from the Residential sector in Galway City has been calculated to be 142 ktCO₂e, which equates to 40% of the total greenhouse gas emissions for Galway City. Heating accounted for 40% (66 ktCO₂) of these emissions, while electricity consumption accounted for 60% (94 ktCO₂). Residential heating in Galway City comes primarily from fossil fuels such as oil (63%) and peat (20%).

Oil	Natural gas	Electricity	Coal	Peat	LPG	Wood	Other
14,275	4,396	5,715	1,484	390	225	187	133

Central Heating Fuel in Occupied Private Households (Census 2016) for Galway City

The Climate Action Plan 2023 targets a 40% reduction in GHG emissions from the Residential sector and a 75% reduction in emissions from electricity production by 2030. The generation of renewable energy and retrofitting of our buildings, including our homes, will significantly contribute to these reduction targets.

Key measures identified in the National Climate Action Plan 2023 for Ireland to meet these targets include:

- Increasing the energy efficiency of existing buildings and putting in place policies to deliver zero-emission new builds and continue to ramp up our retrofitting programme.
- Retrofitting up to 120,000 dwellings to BER B2 by 2025 and up to 500,000 by 2030.
- Putting heat pumps into 45,000 existing and 170,000 new dwellings by 2025 and up to 400,000 existing and 280,000 new dwellings by 2030.
- Introducing a new tax incentive to encourage small-scale landlords to undertake retrofitting works while tenants remain in situ.
- Generating up to 0.8 Terra Watt hour (TWH) of district heating by 2025 and up to 2.5 TWh by 2030.
- Accelerating the delivery of onshore wind, offshore wind, and solar.
- Supporting at least 500 Megawatt (MW) of local community-based renewable energy projects and increased levels of new micro-generation and small-scale generation.

- Phasing out and ending the use of coal and peat in electricity generation.
- Developing a Green Electricity Tariff by 2025 to allow people to use lower cost renewable electricity at times of high wind and solar generation.

Galway City was also recently awarded the designation of Net Zero Pilot city which aims to accelerate retrofits of Housing in the city and the expertise and learning's from other European cities will be essential in identify appropriate energy efficiency measures and behavioural change opportunities to support decarbonisation in this sector. More information on Galway City Net Zero pilot city can be found at <https://netzerocities.eu/galways-pilot-city-activity-net-zero-pilot/>.

3.2 Climate Action: Our Communities and Businesses

Delivering on our climate action targets requires us all to collaborate to realise the opportunities the transition to a carbon-neutral society and economy presents, such as new sustainable careers; warmer more energy-efficient homes; better travel options; more sustainable consumer choice; integrated spatial planning; cleaner air and water; and a better environment for future generations.

Collectively we can advance towards a fair, inclusive and forward-thinking climate neutral economy that champions and supports social, environmental and economic interests. This transition towards a carbon neutral and climate resilient future will promote and create opportunities for new jobs and investment, warranting that no person is left behind in the transition.

Within the non-residential emissions sector, there are three main categories, each of which encompasses a unique set of activities and processes that contribute to greenhouse gas emissions. These categories are:

- **Commercial Sector:** commercial entities such as businesses, offices, and industrial complexes require a lot of energy to operate, which often comes from fossil fuels. Energy consumption is largely driven by activities such as heating, cooling, ventilation, lighting, cooking, and refrigeration.
- **Manufacturing Sector:** manufacturing combustion processes involve a range of activities, such as heating, cooling, and processing materials, and often

require the use of large machinery and equipment, particularly in industries such as iron and steel, non-ferrous metals, and chemicals.

- **Industrial Sector:** industrial processes include, but are not limited to, cement production, lime production, ceramics, solvent use, as well as the food and beverage industry.

At a national level, the non-residential sector (commercial and manufacturing and industrial) accounts for about 20% (13,622ktCO₂e) of national energy and emissions. At a local level, the energy and emissions from the non-residential sector in Galway city has been calculated to be 119 ktCO₂e, which equates to 33% of the total greenhouse gas emissions for Galway city.

The national Climate Action Plan 2023 targets a 35% reduction in emissions by 2030 through changing how we produce, consume, and design our goods and services by breaking the link between fossil fuels and economic progress. Decarbonising industry and enterprise is key to Ireland's economy and future competitiveness with targets outlined below.

- Decreasing embodied carbon in construction materials produced and used in Ireland by at least 30%.
- Reducing fossil fuel use from 64% of final consumption (2021) to 45% by 2025 and further by 2030.
- Increasing total share of heating to carbon neutral to 50-55% by 2025, up to 70-75% by 2030.
- Significantly growing the circular economy and bioeconomy.

Galway City Council will actively support our communities and businesses in understanding climate change, implementing climate action (mitigation and adaptation) and avail of economic opportunities that the transition to a low carbon and resilience society can bring.

3.3 Climate Action: Transport

Emissions from Transport covers the combustion of fuel for all transport activity, including domestic aviation, road, railway, water-borne navigation and other transportation (which includes gas pipeline transportation). Domestic aviation emissions are included in the national inventory but make up less than 1% of transport emissions. International aviation and maritime navigation are reported as “memo items” in the national emission inventory. This means they are not counted as part of Ireland’s national total emissions but are reported by Ireland to the UNFCCC and EU for information purposes.

At a national level, transport accounted for approximately 19% of Ireland’s greenhouse gas (GHG) emissions in 2019 (11 Metric tonne Carbon Dioxide equivalent (MtCo2e), with road transport responsible for 94% of those GHG emissions. Addressing transport emissions is an essential element of our transition to a low carbon Galway City.

At a local level, emissions from transport in Galway City have been calculated to be 94 ktCO₂e, which equates to 26% of the total greenhouse gas emissions from Galway City.

The dominance of private cars as the primary mode of transport in Galway City is reflected in the results, accounting for 67% of all transport emissions, while light duty/heavy duty vehicles and buses accounted for 18% and 15% respectively. These emissions are primarily from the burning of diesel and petrol in combustion engines and is also directly responsible for a range of air pollutants that negatively impact both human health and the environment.

The National Climate Action Plan 2023 sets out an ambitious target of 50% reduction in transport emissions nationally by 2030. This will require a significant change in the way we move around Galway City.

One of the best ways to plan for reducing emissions from travel is to use the ‘Avoid, Shift, Improve’ (ASI) framework, which is shorthand for

- Avoiding or reducing the need for travel by private vehicle,
- Shifting to public transport, walking and cycling and
- Improving the energy efficiency of vehicles we do use.

Key measures identified in the National Climate Action Plan 2023 to meet our targets include:

- Improving our town, cities, and rural planning, and by adopting the Avoid-Shift-Improve approach.
- Changing the way we use our road space and increasing walking and cycling networks.
- Reducing the total distance driven across all car journeys by 20% and progressing towards 1 in 3 electric private cars.
- Using walking, cycling and public transport to account for 50% of our journeys.
- Providing 70% of people in rural Ireland with buses that cater for at least 3 trips to the nearby town daily by 2030.

There will also be wider benefits to making these changes including in the areas of health, air quality, reduced noise pollution, and improved place-making.

Galway City Council are pro-active in working to reduce transport emissions, through progression of the Galway Transport Strategy. This strategy encompasses capital, operational and behavioural initiatives projects to facilitate walking, cycling and public transport, for example, Galway City Cycle Network, Martin Junction Upgrade, Kirwan Junction Upgrade, BusConnects Galway projects (Cross-City Link (University Road to Dublin Road) and Dublin Road); School Streets, and Millers Lane Upgrade. Galway City Council also incorporates compact growth and sustainable transport into the planning process; collaborates with public transport and Electric Vehicle charging providers; and is transitioning and managing the GCC fleet towards more sustainable options.

3.4 Climate Action: Agriculture & Land Use

Agriculture emissions are greenhouse gases (GHG) released into the atmosphere during farming activities, including livestock rearing, crop production, and land use change. These emissions are primarily composed of methane (CH₄) and nitrous oxide (N₂O), which have significantly higher global warming potentials than carbon dioxide (CO₂).

The primary source of agricultural emissions in Ireland is methane from livestock. Livestock such as cows, sheep, and pigs produce methane through enteric fermentation, a digestive process that breaks down feed in their stomachs, leading to the production of methane gas. The use of nitrogen fertilizers and manure management is another significant source of agriculture GHG emissions in Ireland.

Land Use, Land Use Change and Forestry (LULUCF) is responsible for emissions as well as carbon sinks, related to land use change and forestry. It involves the emissions and removals (carbon sinks) relating to land use, land use change and forestry, including forest land, cropland, grassland, wetlands, settlements and other land types, as well as through the harvesting of wood products. Depending on the uses of land, land can either be an emitter of greenhouse gas emissions or it can sequester or absorb greenhouse gases.

Ireland has significant and healthy biosystems, including grassland, hedgerows and forests, which can sequester or absorb carbon dioxide (CO₂) and the use and management of the land has a key role in the response to climate change and maintaining a healthy biodiversity ecosystem.

At a national level Agriculture and LULUCF (Land Use Land Use Change and Forestry) accounted for 34% of Ireland's total GHG emissions in 2019 (22,134 ktCO₂e) and LULUCF accounted for 11% (6,899 ktCO₂e). What sets Ireland apart from its EU counterparts is the scale of our beef and dairy primary production industries relative to our population and land size, and the lack of heavy industry in Ireland's economic make-up.

At a local level, emissions from Agriculture in Galway City have been calculated to be 3 ktCO₂e, which equates to 1% of the total greenhouse gas emissions for Galway City.

The primary source of emissions is methane from livestock, which accounts for about 63% of the total agriculture emissions within the Galway City, with the use of nitrogen fertilizers and manure management being other significant sources. Emissions from farm vehicles and machinery accounts for 9% of the total emissions from this sector in Galway City.

For Galway city, the emissions from LULUCF have been calculated to be -4 ktCO₂e, which equates to -1% of the total greenhouse gas emissions for Galway City.

Cropland, Forestland and Harvested Wood Product serve as a store of carbon and were responsible for the sequestration of 10 ktCO₂ of emissions, whilst the areas Grassland, Settlements, Wetlands and Other Land were responsible for emitting 7 KtCO₂.

The National Climate Action Plan 2023 sets out an ambitious target of 25% reduction in Agriculture GHG emissions by 2030. Sectoral targets for LULUCF GHG emission reduction are yet to be confirmed and will coincide with the completion of a Land-use Review.

The agriculture sector is undergoing a significant transformation to deliver the reduction in GHG emissions and key measures identified in the National Climate Action Plan 2023 to meet our targets include:

- Changing how we fertilise our land and reducing the use of chemical Nitrogen
- Improving the efficiency of our animals, including the earlier finishing of beef cattle, reducing age of first calving for suckler beef cows, improved animal feeding, and a focus on low methane traits in breeding programmes.
- Expanding our organic sector
- Providing land use diversification options for livestock farmers
- Increasing our annual afforestation rates and promote forest management initiatives in both public and private forests
- Improved management of grasslands on mineral soils for carbon sequestration
- Rehabilitation of our peatlands

Farmers are recognised for their excellent food production and their economic and social importance in our communities. Climate change is already impacting farming practices and reducing GHG emissions will be challenging but achievable. Many farmers across Ireland have already commenced the journey of reducing emissions from farming and land use activities and are engaging positively with new guidance on farmer practices and environmental programmes.

While Galway City Council does not have a direct influence over agriculture we are already engaged with farmers and landowners through other environmental programmes and community and business supports.

The protection and enhancement of green infrastructure requires a sustainable, planned approach to development which retains the intrinsic value of natural assets and ensures that there is sufficient well planned greenspace commensurate with population growth and demand.

Galway City Council are pro-active in working to reduce Agricultural and Land use emissions, through progression of the Galway City Biodiversity Plan, No mow procedures, tree planting and the development of Galway City's Green Space Strategy. Galway City has a large and diverse range of habitats and wildlife in relation to its size, due to its varying geology, the extent of urban woodland and its proximity to the river Corrib, Galway Bay and Lough Corrib. These habitats and wildlife are under constant pressure from Human activity and the development and implementation of a Local Biodiversity Action Plan aims to provide a framework for their protection. The Green Space Strategy will take a long-term strategic view with an aim to deliver net positive outcomes for community, economy and the environment.

THANK YOU

Have your say on the development of the Galway City Climate Action Plan

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