Input assumptions for National Energy Projections and associated greenhouse gas emissions 2025-2055

1. Introduction

The Environmental Protection Agency (EPA) is the Competent Authority with responsibility for developing, preparing and publishing projections of greenhouse gas emissions (GHG) for Ireland. The EPA's national GHG projections are produced on an annual basis, in line with EU guidelines, under the reporting requirements of the European Union (EU) Governance of the Energy Union and Climate Action Regulation (EU) 2018/1999[1] (the 'EU Governance Regulation').

The EPA GHG projections estimate what future emissions are likely to be if a specific set of policies and measures are implemented over a defined period. Two scenarios are projected: With Existing Measures (WEM) and With Additional Measures (WAM). In alignment with reporting guidance, the WEM scenario considers policies or measures in place by the end of the latest inventory year (2024). The WAM scenario includes WEM scenario measures plus additional planned measures under discussion that have a realistic chance of future implementation.

The latest EPA GHG Emissions Projections Report presents Ireland's GHG emissions projections from 2025 to 2055. This document supplements the Report, providing information on the assumptions that support the development of the WEM and WAM scenarios used to project Ireland's emissions for the period 2025-2055.

2. Macroeconomic assumptions

Fuel prices: Both scenarios use fuel prices from the latest European Commission recommended harmonised trajectories. In mandatory reporting years, recommended price trajectories for coal, oil and gas are provided by the European Commission to support Member States in the production of emissions projections. The most recent dataset from the European Commission was furnished in June 2024 for the 2025 mandatory reporting year.

ETS prices: Both scenarios include Emissions Trading Scheme (ETS) prices from the latest European Commission recommended harmonised trajectories. The most recent dataset from the European Commission was furnished in June 2024 for the 2025 mandatory reporting year. The trajectory provided includes a varying price that increases to €95 per tonne by 2030 and €220 per tonne by 2055.

Carbon Tax: Both scenarios include a varying carbon tax that increases by €7.50 per annum and reaches €100 per tonne by 2030. Post 2030 the carbon tax remains constant at €100 per tonne to 2055. This is in alignment with the Finance Act 2020 which introduced a 10-year trajectory for carbon tax increases based on reaching €100 per tonne by 2030.

Further detail on key parameters underlying the macroeconomic outlook and therefore the WEM and WAM emissions projections scenarios is included in the 2026 submission made under Article 18 of the EU Governance Regulation[2].

[1] Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.
[2] Table 3, https://reportnet.europa.eu/public/dataflow/1825

3. Input assumptions on activity data and policies and measures

Table 1 below presents a complete list of policies and measures by sector included in the projections, along with their level of implementation. Activity growth by sector is also included in Table 1.

Table 1: Input assumptions on activity data and policies and measures by sector

Agriculture				
Input	**WEM**	**WAM**	**Comparison vs. 2025**	**Policy / Measure**
Projected activity data	Activity data (animal numbers, crop areas and fertiliser use) projected from Teagasc Base Case Scenario.	As per WEM.	Based on current Teagasc Base Case Scenario.	Not applicable (activity data).
Low Emission Slurry Spreading - Bovines	Indirect nitrous oxide savings from Ammonia abatement measures: Target of 60% of all slurry spread by low emissions slurry spreading by 2022; 80% by 2025; and 90% by 2027.	As per WEM.	— No change WEM and WAM	Ag Climatise: Achieve a target of 60% of all slurry spread by low emissions slurry spreading by 2022; 80% by 2025; and 90% by 2027.
Low Emission Slurry Spreading – Pigs	100% use of low emission slurry spreading as per Nitrates Action Plan.	As per WEM.	— No change WEM and WAM	Ireland's Fifth Nitrates Action Programme: Requirement to use LESS applies to the application of slurry produced by pigs on any holding from 1st January 2023.
Further reduction in Crude protein for Dairy cows	Not in WEM.	Further 1% reduction in the crude protein content of Dairy cow concentrates during grazing season (National Air Pollution Control Programme - NAPCP and Fifth Nitrates Action Programme).	— No change WEM and WAM	Ireland's Fifth Nitrates Action Programme: With regard to concentrate feedstuff fed to bovines aged two years and over at grass between 15 April and 30 September, the current maximum crude protein content is 15% on holdings with a previous year's grassland stocking rates of 130 kg N/ha and above. From the 15 April 2025 this maximum crude protein content will be reduced to 14% on all holdings.
Increased Liming	Reduced N fertiliser use due to improved nutrient use efficiency from liming (target liming usage of 2 Mt per annum). Increase in direct CO_2 emissions from lime application to soils	As per WEM (based on Ag Climatise and Teagasc MACC).	— No change WEM and WAM	Ag Climatise: A national liming programme for mineral soils to be rolled out by industry in 2021 which will contribute to improved nitrogen use efficiency for both organic and chemical fertilisers. Liming levels are increasing (currently 1m tonnes per annum), but they are still below historic levels. (1.7m tonnes per annum in 1980s.) Over the course of the next decade, target usage of 2m tonnes per annum.

Reduction in Crude protein of pig feed	Not in WEM.	Reduced crude protein in finishing pig diets as per Teagasc GHG MACC, Ag Climatise and CAP23.	— No change WEM and WAM	Ag Climatise: Reduce the average levels of crude protein in pig feeds to 16%. CAP 2023: Improve how farmers feed their animals by reducing the crude protein content of their food.
Manure management measures	Not in WEM.	Manure additives to reduce NH_3 (and thus indirect N_2O) and CH_4 emissions. Covering of uncovered manure stores as per AgClimatise for both cattle and pigs. Drying of poultry manure.	— No change WEM and WAM	CAP 2023: Develop a methane-reducing slurry additive CAP2024: Develop a pilot programme for the incorporation of methane reducing additives (enteric and manure) within the Signpost dairy farms CAP 2025: Roll out a wider pilot programme for the incorporation of methane reducing additives (enteric and manure) within the Signpost dairy farms. Ag Climatise: All existing external slurry stores should be covered as soon as practically possible, but no later than 31st December 2027. National Air Pollution Control Programme Report: The Irish government has implemented a policy to promote the drying of poultry manures as a measure to reduce GHG emissions. Drying poultry manure involves removing moisture from the manure, which helps to minimize the release of GHGs, including methane and nitrous oxide. By reducing the moisture content, the decomposition process is slowed down, resulting in lower GHG emissions during storage and spreading.

Fertiliser use measures	Reduced use due to increased liming.	Reduce fertiliser nitrogen use to 330,000 t by 2025 and 300,000 t by 2030	— No change WEM and WAM	**WEM** Ag Climatise: A national liming programme for mineral soils to be rolled out by industry in 2021 which will contribute to improved nitrogen use efficiency for both organic and chemical fertilisers. Liming levels are increasing (currently 1m tonnes per annum), but they are still below historic levels. (1.7m tonnes per annum in 1980s.) Over the course of the next decade, target usage of 2m tonnes per annum. **WAM** CAP 2023: Reducing Chemical N Use - Maximum usage of 330,000 tonnes (2025 KPI); Maximum usage of 300,000 tonnes (2030 KPI)
Increased adoption protected urea	Not in WEM.	80-90% uptake of protected urea on grassland farms by 2025 and 90-100% uptake by 2030. Includes increased direct emissions of CO_2 from urea application to soils.	— No change WEM and WAM	CAP 2023: Increased Adoption of Protected Urea - Target 80-90% uptake of protected urea on grassland farms (2025 KPI); Target 90-100% uptake of protected urea on grassland farms (2030 KPI)
Earlier finishing of Beef Cattle (26 to 22-23 months)	Not in WEM.	Target 24-25 months by 2025 and 22-23 months by 2030 as per CAP24.	— No change WEM and WAM	CAP 2024: 2025 KPI - Target 24-25 months average finishing age by 2025; 2030 KPI - Target 22-23 months average finishing age by 2030
Reduced age at first calving of suckler beef cows	Not in WEM.	Reduce age of first calving by 2 months by 2025 and 3.9 months by 2030 as per CAP24.	— No change WEM and WAM	CAP 2024: 2025 KPI - Target 24-25 months average finishing age by 2025; 2030 KPI - Target 22-23 months average finishing age by 2030
Dairy economic breeding index improvements	Not in WEM.	Continuation of trend in increasing Economic Breeding Index (EBI) by €10 per annum leading to decreased CH_4 emissions. Improved animal breeding by focusing on low methane traits.	— No change WEM and WAM	Teagasc MACC 2023: Modelling Assumptions CAP 2025 & 2024: Improved animal breeding by focusing on low methane traits: 0.3-0.5 Mt CO_2eq total 2021-2030

Use of Methane inhibitors	Not in WEM.	Initial focus on winter milk systems fed total mixed rations, progressing to spring calving cohort of herd and in later years development of a slow-release bolus. Addition of a slow-release bolus pasture-based feed additive.	— No change WEM and WAM	CAP 2025: Further Measures: Addition of a slow-release pasture-based feed additive/methane inhibitor Target Total (2021–2030) 0.6 Mt CO_2eq
Limit Straight Urea sales	Not in WEM.	Limit sales of straight Urea to 20,000 t per annum from 2025 onwards as per NAPCP.	— No change WEM and WAM	NAPCP Report 2024: consider the restriction on the use of unprotected/straight urea (solid/granular form) on both grassland and arable crops
Water table management of grasslands on organic/peat soil	Not in WEM.	Water Table Management (Peat soils) Pathway 2 of Teagasc MACC and CAP24 – 80,000 ha of water table manipulation.	— No change WEM and WAM	Teagasc MACC 2023 Pathway 2: 80kha of water table manipulation CAP 2024: Complete a detailed mapping exercise, feasibility study and implementation plan for Teagasc MACC measures to include altered watertable management on 80,000 ha of grasslands on drained organic soils
Diversification	Not in WEM.	Not in WAM.	— No change WEM and WAM	CAP 2024: Diversification measures in Agriculture with savings by 2030 of 1.5 Mt CO_2eq
Transport				
Input	**WEM**	**WAM**	**Comparison vs. 2025**	**Policy / Measure**
Projected Demand - Transport	Aligned with latest National Transport Authority (NTA) reference case activity growth assumptions.	Aligned with two-year delay on demand reduction assumed for 2025 projections, and with updated NTA modelling.	Based on latest NTA modelling	Not applicable (activity data).
Biofuels	2025: E10, B12 2030: E10, B20	As per WEM.	— No change WEM and WAM	CAP 2024: 2025 KPI: E10, B12 2030 KPI: E10, B20

Electric Vehicles	**2030** Private Car BEV: 35% new car share, 10% pre-owned imports (327,478) Private Car PHEV: 30% new car share, 25% pre-owned imports (332,020) LGV BEVs: 10,500 LGV PHEVs: 4,500 HGV BEVs: 150 Total EVs: 674,648	**2030** Private Car BEV: 50% new car share, 15% pre-owned imports (388,766) Private Car PHEV: 30% new car share, 25% pre-owned imports (332,020) LGV BEVs: 24,000 LGV PHEVs: 6,000 HGV BEVs: 600 Total EVs: 751,386	**WEM** ▲ + 109,946 EVs (564,702 total last year) — No change for LGV BEVs, LGV PHEVs and HGV BEVs **WAM** ▲ + 110,636 EVs (640,750 total last year) — No change for LGV BEVs, LGV PHEVs and HGV BEVs	CAP 2024: Private Car Fleet - Battery EV share of total passenger car fleet (30%) EV share of new registrations (100%) 845,000 Private EVs Commercial Fleet - 20% EV share of total LGV fleet; 95,000 commercial EVs; 30% ZE share of new heavy duty vehicle registrations; 3,500 HGVs
Avoid & Shift	Activity level based on new (unpublished) projections of private car and goods vehicle activity provided by the National Transport Authority (NTA)	Activity level based on new (unpublished) projections of private car and goods vehicle activity provided by the National Transport Authority (NTA)	Based on unpublished NTA projections of private car and goods vehicle activity	CAP 2024: 2030 'Avoid' measures: • 20% reduction in total vehicle kms. • 20% reduction in total car kms. • 20% reduction in commuting car kms. • 50% reduction in fuel usage. 2030 'Shift' measures: • 50% increase in daily active travel journeys. • 130% increase in daily public transport journeys. • 25% reduction in daily car journeys. Shift in Daily Mode Share: • 2018: 72% (car), 8% (Public Transport), 20% (Active Travel). • 2030: 53% (car), 19% (PT), 28% (Active Travel). • 30% shift of all E-to-E car journeys to sustainable modes. Avoid + Shift measures combine to achieve 2.09 Mt CO_2eq abatement for 2030 period.

Alternative Fuel Vehicles	297 GWh of CNG use in HGVs by 2030 based on GNI's 2024 NDP. Flat post 2030 Sustainable Aviation Fuel (SAF) EU targets as per ReFuelEU Aviation Regulation: 2025: 2%, 2030: 6%, 2050: 70%	As per WEM.	▲ Sustainable Aviation Fuel (SAF) now included in WEM	CAP 2023: Rollout of Project Causeway and Green Connect CNG refuelling infrastructure S.I. No. 396/2025 - European Union (ReFuelEU Aviation) (Competent Authorities) Regulations 2025
Energy Efficiency	No improvement in ICE efficiency apart from effects of switching to more efficient BEV and PHEV vehicles. It is assumed that background improvements in efficiency are cancelled out by an increase in vehicle weight.	As per WEM.	— No change WEM and WAM	No defined target.
Biomethane (cross-cutting)				
Input	**WEM**	**WAM**	**Comparison vs. 2025**	**Policy / Measure**
Biomethane delivery	1 TWh by 2030 Does not include Renewable Heat Obligation Assume biomethane is supplied pro rata across all gas users (as per physical flow, different to allocation in RES calculation)	1.75 TWh by 2030 Includes Renewable Heat Obligation Sector allocation as per WEM.	**WEM** — No change **WAM** ▼ -2.55 TWh (4.3 TWh in 2030 last year) Note: Sectoral allocation has changed from priority allocation (transport, datacentres, remaining split pro-rata between services and industry) to pro rata supply across all gas users (as per physical flow)	CAP 2024 2025: Agriculture-based supply chain where target is 'up to' 1 TWh biomethane production. 2030: Agriculture-based supply chain where target is 'up to' 5.7 TWh biomethane production.

Electricity				
Input	**WEM**	**WAM**	**Comparison vs. 2025**	**Policy / Measure**
Coal	Moneypoint shut down by March 2029 with primary fuel switching from coal to Heavy Fuel Oil (HFO) by June 2025. As it is not active in the wholesale electricity market, and the emergency situations during which it may run are not captured in a process like the Projections, Moneypoint will not run in the model.	As per WEM.	— No change WEM and WAM	CAP 2024 & 2025 Phase out and end the use of coal and peat in electricity generation
Peat	Edenderry ED1 100% biomass 2024-2030 and close thereafter.	As per WEM.	— No change WEM and WAM	CAP 2024 & 2025 Phase out and end the use of coal and peat in electricity generation
Distillate Oil	All 324 MW capacity assumed to shut down by 2035 due to reaching end of life.	As per WEM.	— No change WEM and WAM	No defined target.
Hydrotreated Vegetable Oil (HVO)	Edenderry gas-turbine units (ED3, ED5) assumed to switch to HVO in 2025 and switch to natural gas in 2029 once gas-grid connection complete. 0.5 GW of new HVO-fired gas turbine capacity added in 2027 (share of total 1.6 GW of 'risk adjusted capacity' of gas turbines in AIRAA 2025-2034)	As per WEM.	— No change WEM and WAM	No defined target.
Natural gas	1.2 GW of new gas capacity assumed by 2028 (share of total 1.6 GW of 'risk adjusted capacity' of gas turbines in AIRAA 2025-2034). Aghada gas turbine (AT1) assumed to remain open into mid-2030s as closure notice has been withdrawn.	As per WEM.	1.2 GW of new gas capacity assumed by 2028 based on All-Island Resource Adequacy Assessment 2025-2034 (vs. 1.4 GW of new gas capacity assumed by 2030, as per 'risk adjusted capacity' in Generation Capacity Statement 2023)	CAP 2024 2030: At least 2 GW of new flexible gas-fired generation

Onshore Wind	2030: 6.5 GW 2040: 9 GW	2030: 7.1 GW 2040: 10.7 GW	**WEM** ▼ -0.3 GW (6.8 GW in 2030 last year) **WAM** — No change 2030	CAP 2024 2030: 9 GW (part of 80% RES E - % of electricity demand from renewable energy)
Offshore Wind	2030: 0.03 GW 2040: 6.5 GW	2030: 1.4 GW 2040: 8.8 GW	**WEM** ▼ -1.37 GW (1.4 GW in 2030 last year) **WAM** ▼ -1.3 GW (2.7 GW in 2030 last year)	CAP 2024 2030: At least 5 GW (part of 80% RES E - % of electricity demand from renewable energy)
Solar PV	2030: 6.3 GW 2040: 9.1 GW	2030: 7.1 GW 2040: 11.6 GW	**WEM** ▲ +0.6 GW (5.7 GW in 2030 last year) **WAM** ▲ +0.8 GW (6.3 GW in 2030 last year)	CAP 2024 2030: 8 GW (part of 80% RES E - % of electricity demand from renewable energy)
Other generation	No growth in CHP, hydro, waste to energy No ocean energy	No growth in CHP, hydro, waste to energy No ocean energy until 2040	**WEM** ▼ No ocean energy assumed across time horizon (assumed after 2040 last year) **WAM** **— No change**	No defined targets.
Interconnection	Greenlink (IE-GB): 500 MW, Apr 2025 North-South (IE-NI): increase from 300 MW to 1250 MW, Oct 2031 Celtic (IE-France): 700MW, Apr 2028 MaresConnect: 750 MW, Jan 2031	As per WEM.	**WEM and WAM** ▼Greenlink: 3 month delay ▼North-South: - 100 MW, 4 year 9 month delay ▼ Celtic: 15 month delay	No defined targets.

Zero-Carbon Gas as Primary Fuel Source for Power Generation Allocated to Electricity Sector	Hydrogen: 0 TWh Biomethane: Share of biomethane total equals share of gas consumption for power. See separate Biomethane section for totals assumptions.	As per WEM.	**WEM and WAM** — Hydrogen: No change ▲ Biomethane: now used for electricity generation (as per physical flows approach)	CAP 2024 Green hydrogen production from renewable electricity surplus generation
Demand-Side Units (DSU)	2030: 860 MW (as per AIRAA 2025-2034)	As per WEM	**WEM and WAM** ▲ + 115 MW (745 MW in 2030 last year)	No defined target.
Storage	2030: 1.4 GW with fleet-average duration of 2.4 hours (aligned with AIRAA 2025-2034 data) 2040: 2.1 GW with fleet-average duration of 3.6 hours	2030: 1.6 GW with fleet-average duration of 2.9 hours Additional 100 MW of 4-h and 100 MW of 8-h included by 2030 2040: 2.7 GW with fleet-average duration of 4.3 hours	**WEM** ▲ +0.4 GW, +0.7 hours (1 GW with fleet weighted-average duration of 1.7 hours by 2030 last year) **WAM** ▼ -0.2 GW, ▲ +0.4 hours (1.8 GW with fleet weighted-average duration of 3.3 hours last year)	No defined target.
Large Energy Users	EirGrid AIRAA 2025-2034 median scenario from 10-year forecast, with extrapolation thereafter.	As per WEM.	Based on AIRAA 2025-2034 median scenario.	CAP 2024 “Managing energy demand in the commercial sector, with a potential focus on data centre power demand” CAP 2025 "...ensure that new Large Energy User grid connections do not contribute to energy security challenges"

Buildings - Residential				
Input	**WEM**	**WAM**	**Comparison vs. 2025**	**Policy / Measure**
Projected Demand - Residential New Builds	New build assumptions are aligned with the Central Bank forecast for 2026-2028, increasing to 50k per annum in 2030 from National Planning Framework Policy objective 42 and stable thereafter, allowing for 0.25% per annum obsolescence	As per WEM.	Single assumption for both WEM and WAM this year (aligned with Central Bank forecast for 2026-2028) vs. last year's WEM and WAM projections which were based on Government targets **WEM** + 9.5k new homes per annum (40.5k last year) **WAM** -10k new homes per annum (60k last year)	Not applicable (activity data).
Projected Demand - Residential Existing Builds	Existing dwelling energy use calibrated to energy balance in base year. In response to price shocks from energy security crises, oil and gas use per dwelling has reduced. For existing dwellings, it is assumed that oil and gas use per dwelling will return to pre-crisis levels by 2030.	As per WEM.	Existing dwelling energy use calibrated to energy balance in base year.	Not applicable (activity data).

Domestic Heat Pumps	**Existing dwellings**: Assume SEAI grants continue at current level throughout modelled time horizon, equating to: - slight growth in uptake leading to ~4.5k per annum by 2030 and total ~39,700 additional heat pumps in existing dwellings compared to 2018. - 30,880 dwellings retrofit via local authority schemes 2018-2030 **New Dwellings**: Assume heat pumps installed in all new dwellings from 2025. **Total installed Residential Heat Pumps (includes heat pumps installed before 2019 i.e. pre CAP targets)** : - 430,000 by 2030.	**Existing dwellings**: Supports will increase to enable the installation of ~7k per annum by 2030 with total of ~47,200 additional heat pumps in existing dwellings by 2030 compared to 2018 and that grants remain at this level throughout modelled horizon (based on consultation with SEAI delivery team). 33,690 dwellings retrofit via local authority schemes 2018-2030 **New Dwellings**: As per WEM **Total installed Residential Heat Pumps (includes heat pumps installed before 2019 i.e. pre CAP targets)** : - 440,000 by 2030.	**WEM** ▼ **Total:** -5k 2030 (430k this year vs. 435k last year) ▼ **Existing:** -10.8k 2030 (70.6k this year vs. 81.4k last year) ▲ **New:** +9.5k new homes per annum by 2030 (50k this year vs. 40.5k last year) **WAM** ▼ **Total:** -131k 2030 (440k this year vs. 571k last year) ▼ **Existing:** -62.1k 2030 (80.9k this year vs. 143k last year) ▼ **New:** -10k new homes per annum by 2030 (50k this year vs. 60k last year)	CAP 2024 2030: 400,000 heat pumps in existing homes. 280,000 heat pumps in new builds.
Residential Energy Efficiency Programmes	Assume that SEAI energy efficiency grants continue at their current level.	Assume that energy efficiency grants increase beyond current levels and the Home Energy Upgrade Loan Scheme is extended to support the installation of ~83k additional heat pumps in existing dwellings by 2030 compared to 2018 (includes SEAI scheme retrofits and Local Authority housing retrofits). Assume that SEAI energy efficiency grants reset to current values post-2030 and remain active through the rest of the modelled time horizon.	**WEM** — No change **WAM** ▼ Home Energy Upgrade Loan Scheme supporting 83k additional HPs in existing dwellings (vs 143k last year) ▼ SEAI energy efficiency grants reset to current values post-2030 (vs. remaining at higher level until 2039 last year)	CAP 2024 2030: Reaching 500,000 dwellings retrofitted to BER B2 ‘or cost optimal equivalent’.

Buildings - Commercial and Public Services				
Input	**WEM**	**WAM**	**Comparison vs. 2025**	**Policy / Measure**
Projected Demand - Services	Public and commercial services sector activity growth based on CSO forecasts of population and labour force	As per WEM.	Based on CSO forecasts of population and labour force this year vs i3e output last year	Not applicable (activity data).
Public Sector Energy Efficiency Programmes	Current levels of energy efficiency grants are assumed to continue throughout the modelled horizon via Community Energy Grants, EXEED and the Business Energy Upgrade scheme. Current levels of heat pump grants are assumed to continue until 2030 via the Support Scheme for Renewable Heat (SSRH) and Business Energy Upgrade scheme. SSRH operational tariffs are assumed to continue until 2030, with payments to 2045. Mandatory energy audits for large organisations (see https://www.seai.ie/business-and-public-sector/energy-auditing/).	Current levels of energy efficiency grants are assumed to continue throughout the modelled horizon via Community Energy Grants, EXEED and the Business Energy Upgrade scheme. Current levels of heat pump grants are assumed to continue until 2039 via the SSRH and Business Energy Upgrade scheme. SSRH operational tariffs are assumed to continue until 2039, with payments to 2054. Mandatory energy audits for large organisations (see https://www.seai.ie/business-and-public-sector/energy-auditing/).	**WEM** ▲ Current levels of energy efficiency grants assumed to continue to 2055 (vs 2030 last year) **WAM** ▲ Current levels of energy efficiency grants assumed to continue to 2055 (vs 2039 last year) ▼ effective ban on the installation of fossil fuel boilers from 2040 removed from WAM	See District Heating measure. See Heat Pump measure. See Biomethane measure. See Carbon-Neutral Heating measure. CAP 2024: Reduce energy related GHG emissions by 51% in 2030. Improve energy efficiency in the public sector by 50% by 2030. Support public and commercial buildings to deliver savings of 735 $KtCO_2e$.

Commercial Sector Energy Efficiency Programmes	Current levels of energy efficiency grants are assumed to continue throughout the modelled horizon via Community Energy Grants, EXEED and the Business Energy Upgrade scheme. Current levels of heat pump grants are assumed to continue until 2030 via the Support Scheme for Renewable Heat (SSRH) and Business Energy Upgrade scheme. SSRH operational tariffs are assumed to continue until 2030, with payments to 2045. Mandatory energy audits for large organisations (see https://www.seai.ie/business-and-public-sector/energy-auditing/).	Current levels of energy efficiency grants are assumed to continue throughout the modelled horizon via Community Energy Grants, EXEED and the Business Energy Upgrade scheme. Current levels of heat pump grants are assumed to continue until 2039 via the Support Scheme for Renewable Heat (SSRH) and Business Energy Upgrade scheme. SSRH operational tariffs are assumed to continue until 2039, with payments to 2054. Mandatory energy audits for large organisations (see https://www.seai.ie/business-and-public-sector/energy-auditing/).	**WEM** ▲ Current levels of energy efficiency grants assumed to continue to 2055 (vs 2030 last year) **WAM** ▲ Current levels of energy efficiency grants assumed to continue to 2055 (vs 2039 last year) ▼ effective ban on the installation of fossil fuel boilers from 2040 removed from WAM	See Biomethane Measure. See Carbon-Neutral Heating measure. CAP 2024: Support public and commercial buildings to deliver savings of 735 $KtCO_2e$.
Support Scheme for Renewable Heat (SSRH)	Current SSRH tariffs simulated to 2045 (modelling supports to newcomers until 2030).	Current SSRH tariffs simulated to 2054 (modelling supports to newcomers until 2039).	**WEM** — No change **WAM** ▼ effective ban on the installation of fossil fuel boilers from 2040 no longer assumed	CAP 2024 Overall target is 70-75% share in renewable heating.

Buildings – Residential / Commercial and Public Services				
Input	**WEM**	**WAM**	**Comparison vs. 2025**	**Policy / Measure**
District Heating	By 2030: Tallaght District Heating Nework (TDHN) Phase 2 for 10.2 GWh total By 2040: TDHN (26.4 GWh) + Dublin District Heating System (DDHS) (107 GWh) + other pipeline projects (8 GWh) for a total of 141.4 GWh	By 2030: TDHN + DDHS + 5 pipeline projects for 203.4 GWh total By 2040: reach 2.7 TWh CAP 2030 target	**WEM** ▼ **Total:** -63.8 GWh 2030 (10.2 GWh this year vs. 74 GWh last year) ▼ **TDHN**: -18.8 GWh 2030 (10.2 GWh this year vs. 29 GWh last year) ▼ **DDHS:** -45 GWh 2030 (0 GWh this year vs. 45 GWh last year) **WAM** ▼ **Total:** - 10.6 GWh 2030 (203.4 GWh this year vs 214 GWh last year) Note: additional capacity in WAM in 2030 = 5 pipeline projects totalling 193 GWh	CAP 2024 2030: Up to 2.7 TWh District Heating (2.5 Residential/0.2 Commercial).
Liquid Biofuels	No supports assumed	Assume that the RHO supports a certain level of liquid biofuel blending. At the time of modelling there was no publicly available information on the final design of the RHO, or on how much liquid biofuels would be supported. We have included an initial estimate based on an unpublished analysis provided by the SEAI bioenergy team, but note the significant uncertainty and that more information on RHO design is needed. Sector Splits: Assume bioliquids are supplied to all built environment sectors pro rata of their heat use	**WEM** — No change **WAM** ▲ Supply of bioliquids to built environment sectors assumed (no supports assumed last year)	CAP 2024: The RHO will increase the use and production of renewable fuels for heat, while spreading the cost across consumers of non-renewable fuels.

Building Regulations	All new dwellings are Nearly Zero Energy Buildings (NZEB).	As per WEM.	**WEM** — No change **WAM** ▼ Last year assumed CAP24 position for WAM (All new buildings NZEB by 2025, All new buildings ZEB by 2030, ZEB =new standard which does not cause any on-site carbon emissions from fossil fuels).	CAP 2024 2025: All new buildings NZEB. 2030: All new buildings ZEB. (ZEB =new standard which does not cause any on-site carbon emissions from fossil fuels).
Energy Efficiency Obligation Scheme (EEOS)	Assume current level of savings (that are uniquely attributable to EEOS) continue annually until 2030.	Assume 60% of recast EED Article 8 target will be met through EEOS. (See CAP21 Section 14.2.8 EEOS.)	— No change WEM and WAM	Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency CAP 2021 Section 14.2.8
Industry				
Input	**WEM**	**WAM**	**Comparison vs. 2025**	**Policy / Measure**
Projected Demand - Industry	Activity growth assumptions for key large industrial energy users based on industry consultation, e.g. metals, cement, refining, wood products and chemicals. Other industry subsectors based on 2024 I3E subsector growth rates	As per WEM.	Based on current i3e output	Not applicable (activity data).
Cement Industry	Process Emissions from clinker production based on an Industry-provided cement growth rate of 1.4% per annum with a cap of 4.7 Mt cement per annum (max capacity). 4.7Mt cement (4.07 Mt clinker) is reached by 2049 and flatlined thereafter.	As per WEM.	— No change WEM and WAM	Not applicable (activity data).

Carbon neutral heating in industry	Modelled implicitly - growth in RES-H is an outcome of the model depending on demand growth and the assumptions on individual renewable heat sources.	Modelled implicitly - growth in RES-H is an outcome of the model depending on demand growth and the assumptions on individual renewable heat sources.	— No change WEM and WAM	CAP 2024 2025: 50-55% share in carbon neutral heating. 2030: 70-75% share of carbon neutral heating in total fuel demand.
Construction Materials and CCS	Not modelled explicitly – Projections benchmarked to underlying growth trajectories informed by available macro trend data.	Not modelled explicitly – Projections benchmarked to underlying growth trajectories informed by available macro trend data.	— No change WEM and WAM	CAP 2024 2025: Decrease by 10% for materials produced and used in Ireland. Products substitution and reduction of clinker content in cement. 2030: Decrease by at least 30% for materials produced and used in Ireland. Products substitution and reduction of clinker content in cement (1.0 Mt CO_2 abatement by 2030)
Embodied carbon in construction	Not in WEM.	Not modelled currently as no agreed method for measuring yet, ultimately any reduction in cement production will be reflected in the fuel numbers and this is how the saving will be represented in the projections.	— No change WEM and WAM	CAP2024 2025: Decrease by 10% for materials produced and used in Ireland. 2030: Decrease by 30% for materials produced and used in Ireland.
Other				
Input	**WEM**	**WAM**	**Comparison vs. 2025**	**Policy / Measure**
Waste	Based on projected reduction of waste going to landfill and the age of existing waste in landfill.	As per WEM.	— No change in source of activity data	Not applicable (activity data).
F-gases	Expected phase out of f-gases due to F-gas EU regulation 2024/573	As per WEM.	New measure	Regulation (EU) 2024/573 of the European Parliament and of the Council of 7 February 2024 on fluorinated greenhouse gases

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Input	**WEM**	**WAM**	**Comparison vs. 2025**	**Policy / Measure**
Forestry	Afforestation rates of 2,000 ha/year.	Afforestation rates of 8,000 ha/year for 2026-2030. Prevent deforestation on 495 ha/year. Afforestation: 2,000 ha agroforestry by 2030. Extended rotation on 31% of managed forests.	➖ No change WEM and WAM	**CAP 2024** Afforestation rates of 8,000 ha/year **Teagasc MACC 2023 Pathway 2** Afforestation: Afforest 8 kha/yr Preventing deforestation on 495 ha/yr Afforestation: 2 kha agroforestry Extend rotation: 31% of forests
Grasslands	Not in WEM.	Optimal management of 750,000 ha grassland on mineral soils by 2030. Water Table Management (Peat soils) Pathway 2 of Teagasc MACC and CAP24 – 80,000 ha of water table manipulation.	➖ No change WEM and WAM	**CAP 2024** Improve the management of at least 450,000 ha of grassland on mineral soils for carbon sequestration by 2030; Optimal management of grassland on an extra 300,000 ha of grassland on mineral soils **Teagasc MACC 2023 Pathway 2** 80kha of water table manipulation. **CAP 2024** Complete a detailed mapping exercise, feasibility study and implementation plan for Teagasc MACC measures to include altered watertable management on 80,000 ha of grasslands on drained organic soils
Wetlands	33,500 ha of peatlands rewetting/restoration/ rehabilitation as part of Bord na Móna EDRRS and LIFE People and Peatlands.	35,900 ha of peatlands rehabilitated as part of Bord na Móna EDRRS and LIFE People and Peatlands. Additional 30,000 ha exploited peat rewetted.	➖ No change WEM and WAM	**CAP 2024** **WEM** 2025 KPI: 33,000 ha of peatlands rehabilitated as part of Bord na Móna EDRRS and LIFE People and Peatlands **WAM** 2030 KPI: 35,900 ha of peatlands rehabilitated as part of Bord na Móna EDRRS and LIFE People and Peatlands. Additional 30,000 ha exploited peat rehabilitated.

4. Policy Input Assumptions not included in the WAM Scenario

In so far as possible, the policies and measures contained in the Climate Action Plans and other relevant Government plans and policies are included in these projections. However, as detailed below, there can be several exceptions.

In some cases, policies and measures were not included as the evidence of an implementation pathway that supported inclusion was not available at the time of preparing the projections, or the intended ambition of the planned policy or measure was revised. Revision of policies and measures reflect changes to the level of implementation based on assessment of the latest available information provided by the relevant Government Departments, including public and private sector bodies. These measures combined, if delivered as anticipated, are estimated to provide a conservative additional abatement of 16 Mt CO_2eq in 2030.

For these projections, the individual policies and measures that are not included are described below.

Agriculture

- Diversification measures in Agriculture with savings by 2030 of 1.5 Mt CO_2eq are not included as further information is needed to model an implementation pathway for these measures.

Transport

- Climate Action Plan 2023 introduced an Avoid/Shift policy to achieve an abatement of 2.09 Mt CO_2eq by 2030 including a range of behavioural change and sustainable transport measures. One of these measures relates to price increases in petrol and diesel out to 2030 and has no supporting policy so is not included in the EPA projections.

Electricity

- 2 GW offshore wind for green hydrogen uses in industry post-2030 (as outlined in Chapter 12 of the Climate Action Plan 2024) is not currently included.
- Zero-emission gas-fired generation from biomethane and green hydrogen (via 2 GW offshore wind) commencing by 2030 is not currently included.

Industry

- Measures aimed at achieving emissions savings from a decrease in embodied carbon in construction materials (1.0 Mt CO_2 abatement by 2030) are not currently modelled as there is no evidence of an implementation pathway.

Overall

Ireland's 2024 and 2025 Climate Action Plans both discuss unallocated emissions savings of 26 Mt CO_2eq over the 2026-2030 period (5.25 Mt CO_2eq annually). While CAP 25 set out actions to "Allocate currently unallocated emissions savings by sector ahead of 2026", and "Update sectoral emissions ceilings for the second carbon budget period (2026-2030)", the outcomes of these actions were not available in time to include in the current projections.