

CLIMATE
CHANGE
ADVISORY
COUNCIL



ANNUAL REVIEW 2026



Transport

Annual Review 2026: Transport

Submitted to the Minister for Climate, Energy and the Environment
on 16 June 2026

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

Tel: 01 2680180

Email: info@climatecouncil.ie

www.climatecouncil.ie

© Climate Change Advisory Council 2026

ISBN: 978-1-80009-355-3

How to cite:

Climate Change Advisory Council (2026), *Annual Review 2026:
Transport*. <https://www.climatecouncil.ie/councilpublications/>



Acknowledgements

The Climate Change Advisory Council would like to acknowledge the significant contributions of the Secretariat of the Climate Change Advisory Council to the drafting of this part of the Annual Review 2026, especially:

Meabh Gallagher	Ben MacFarlane
Eleanor Mathews	Stephen Flood
Phillip O'Brien	Marta Carrasco
Dylan O'Flynn	George Hussey

The Climate Change Advisory Council also acknowledges the contributions of the following in the preparation of this Review:

- ▶ the Adaptation Committee of the Climate Change Advisory Council,
- ▶ the Environmental Protection Agency.

The Climate Change Advisory Council would also like to thank:

- ▶ Ecodiversity for their provision of technical and project management services,
- ▶ Prepress Projects for their copy-editing, proofreading, design and typesetting of this Review.



Summary for All

In 2024, the Transport sector accounted for 42.3% of Ireland's final energy demand and emissions fell by only 1.3%, with a further 2% reduction estimated in the first half of 2025. The sector has likely exceeded its first sectoral emissions ceiling (2021–2025) and is projected to exceed its second (2026–2030). Ongoing instability in global energy markets exposes Ireland to fossil fuel price volatility and supply risks, reinforcing the need to deliver on the Government's commitment to end Ireland's reliance on fossil fuels. Recent emergency fossil fuel excise reductions are insufficiently targeted and likely to benefit higher income households most.

Since 2018, passenger car numbers have grown by 19%, while transport fossil fuel demand has fallen slightly due to increased biofuel use and electric vehicle (EV) uptake. After declining in 2024, new registrations of passenger battery electric vehicles (BEVs) were up 36% in 2025 and the second-hand BEV import market grew strongly. Despite this, BEVs accounted for only 19% of new car registrations and 4% of the total passenger car fleet. The number of fast-charging points increased only slightly in 2025, and deployment of electric heavy goods vehicles and buses is not keeping pace with 2030 targets.

In 2025, public transport use increased by 6% and local link passenger journeys increased by 19%. However, stagnating data on total passenger journeys may indicate capacity constraints on some services. Around 1,000 km of active travel infrastructure delivered since 2020 helps to avoid up to 660,000 daily car trips across Ireland's five main cities.

Storm Chandra and prolonged rainfall in early 2026 exposed the transport infrastructure's vulnerability to extreme weather, and continued delays to the National Ports Policy hinder coordinated planning for climate impacts across Ireland's ports.

Key recommendations

Fossil fuel crisis

The Government should replace untargeted components of the emergency measures introduced in response to the fossil fuel crisis with temporary measures targeting the most vulnerable in society, while continuing planned carbon tax increases and using the revenue to support climate action and a Just Transition.

Public transport

Funding for existing public transport services and priority projects, including DART+ South West, Luas Finglas and the National Transport Authority's Park and Ride Investment Programme, should be increased, and delivery accelerated, to improve capacity, reliability and frequency of services, enabling people to shift to public transport and reducing congestion.

Electric vehicle uptake

The Government should ensure targeted supports are introduced to make EVs more affordable for lower income and car-dependent households and actively promote the switch to EVs in the School Transport Scheme. The Government should also ensure that public EV charging information is accessible, reliable and up to date, and that clear industry service standards are introduced to improve public confidence in charging infrastructure.

Resilient transport network

Climate risk and adaptation considerations should be built into all major transport planning and investment decisions, including the updated National Ports Policy, the annual programme of Regional and Local Road Grant Allocations, drainage-related asset management guidance and design manuals for national roads, and major projects prioritised under the Rail Project Prioritisation Strategy.



Abbreviations

Abbreviation	Definition
AFIR	Alternative Fuels Infrastructure Regulation
BEV	battery electric vehicle
CPO	charge point operator
CSO	Central Statistics Office
DPENDR	Department of Public Expenditure, Infrastructure, Public Service Reform and Digitalisation
EPA	Environmental Protection Agency
ESRI	Economic and Social Research Institute
ETS2	Emissions Trading System 2
EV	electric vehicle
HDV	heavy duty vehicle
HGV	heavy goods vehicle
HVO	hydrotreated vegetable oil
ICE	internal combustion engine
IEA	International Energy Agency
KPI	key performance indicator
NDP	National Development Plan
NTA	National Transport Authority
P&R	park and ride
PHEV	plug-in hybrid electric vehicle
PSO	Public Service Obligation
RES-T	renewable energy share in transport
SCP	Social Climate Plan
SEAI	Sustainable Energy Authority of Ireland
SEC	sectoral emissions ceiling
SMP	Sustainable Mobility Policy



Abbreviation	Definition
TII	Transport Infrastructure Ireland
TOD	transport-oriented development
VRT	vehicle registration tax
WAM	with additional measures
WEM	with existing measures
ZEHDV	zero-emission heavy duty vehicle
ZEVI	Zero Emission Vehicles Ireland



Contents

Acknowledgements	iii
Summary for All	iv
Abbreviations	v
Key observations	viii
Key recommendations	xi
1. Introduction	1
2. Sectoral emissions ceilings and Climate Action Plan targets	1
3. Indicators	2
3.1. Transport emissions and main trends	2
3.2. Transport resilience indicators	3
4. Progress on previous Climate Change Advisory Council recommendations	4
4.1. Avoid–Shift–Improve framework	4
4.2. Adaptation and resilience	6
5. Analysis and discussion	7
5.1. Fossil fuel crisis and climate action	7
5.1.1. Fossil fuel demand reduction	10
5.1.2. Carbon pricing and taxation	11
5.2. Public transport	12
5.2.1. Public Service Obligation funding	12
5.2.2. Decarbonisation of public transport: electric bus fleet	13
5.2.3. Key public transport infrastructure projects	14
5.2.4. Park and Ride	15
5.3. Battery electric vehicles and charging infrastructure	16
5.3.1. Targeted measures for electric vehicle uptake	17
5.3.2. Second-hand market	17
5.3.3. Electric vehicle charging infrastructure	18
5.4. Decarbonisation of commercial fleets	19
5.4.1. School transport decarbonisation	20
5.4.2. Biofuels	21
5.5. Active travel and micromobility	21
5.6. Resilient transport network	24
5.6.1. Ports resilience	24
5.6.2. Roads resilience	24
5.6.3. Rail resilience	25
References	27



Key observations

Transport sector emissions and main trends

- ▶ The Transport sector is consistently the largest source of energy demand in Ireland, accounting for 42.3% of total final energy demand^[1] and 21.8% of total national emissions in 2024.^[2]
- ▶ Emissions in the Transport sector were 11.8 Mt CO₂ eq in 2024, compared with 11.9 Mt CO₂ eq in 2023, a decrease of 1.3%.^[2] The Sustainable Energy Authority of Ireland Interim Energy Balance for 2025 estimated that Transport sector emissions in the first 6 months of 2025 were 5.7 Mt CO₂ eq, a 2.0% decrease over the same period in 2024.^[3]
- ▶ The period 2021–2025 constitutes the first carbon budget. Based on the most recent projections, the first Transport sectoral emissions ceiling (SEC) is estimated to have been exceeded by 4.4 Mt CO₂ eq. The ‘with existing measures’ scenario projects an overshoot of the second Transport SEC by 17.7 Mt CO₂ eq, or 47.7%. Under the ‘with additional measures’ scenario, the second Transport SEC is projected to be exceeded by 12.5 Mt CO₂ eq, a 34% overshoot.
- ▶ The most recent data indicate that the renewable energy share in transport (RES-T) in 2024 was 8.7%, up from 7.6% in 2023, due to increased use of biofuels and electrification of transport.^[4] EU Member States have a target of 29% RES-T by 2030.
- ▶ Ongoing instability in global energy markets, including the recent impact of conflict in the Middle East, continues to expose Ireland to fossil fuel price volatility and supply risks. Timely, targeted and temporary support measures that are aligned with long-term energy transition are required to address highly volatile fossil fuel prices. The emergency measures introduced in 2026 include significant reductions in excise duties on fossil fuels, which are likely to benefit higher income households more in absolute terms due to higher consumption and the untargeted nature of the excise cuts.

Electric vehicles and charging infrastructure

- ▶ The total number of passenger cars in Ireland increased from 2,106,369 in 2018 to 2,511,627 in 2025, an increase of 19%.^[5]
- ▶ In 2025, 23,398 new battery electric vehicles (BEVs) were registered, up 36% on 2024. However, 2024 had seen a fall in electric vehicle (EV) sales. Relative to 2023, the increase in the number of new BEVs in 2025 was 4%.^[6]
- ▶ In 2025, new BEV passenger cars represented approximately 19% of the total new car fleet.^[7] This compares with the Climate Action Plan target of a 100% EV share of new registrations by 2030.



- ▶ In 2025, there was a significant increase in the volume of imported second-hand BEVs – 3,711 in 2025 compared with 1,714 in 2024 (a 116% increase). A total of 20,176 second-hand hybrid EVs were imported, compared with 15,365 in 2024 (a 31% increase).^[8]
- ▶ As of the end of 2025, Central Statistics Office data showed the total fleet of private BEVs was 101,567, while the fleet of private plug-in hybrid electric vehicles (PHEVs) was 91,753.^[9] This is a total of 193,320 private EVs. In October, the Minister for Transport announced that the target set in the Climate Action Plan of 175,000 EVs by 2025 had been achieved.
- ▶ BEVs accounted for 4.0% of the total passenger car fleet in 2025. PHEVs accounted for 3.7% of the total passenger car fleet. This compares with the Climate Action Plan target of a 30% BEV share of the total passenger car fleet by 2030.
- ▶ The uptake of zero-emission heavy goods vehicles in Ireland is lagging behind the country's targets, with 165 electric heavy goods vehicles in 2025 out of a total fleet of 52,142.^[10] In response, the Zero-Emission Heavy Duty Vehicle Purchase Grant Scheme has been reviewed and revised in consultation with sectoral stakeholders.^[11]
- ▶ In 2025, the number of publicly accessible alternating current recharging points per capita was the same as 2024, with 5.4 chargers per 10,000 people. The EU average is 19.3 per 10,000 people. However, the number of publicly accessible direct current recharging points increased from 2.2 to 2.4 chargers per 10,000 people in 2025 from 2024. The EU average is 4.7 chargers per 10,000 people. This is indicative of the roll-out of more advanced charging technologies.^[12]

Public transport and active travel

- ▶ Regarding public transport passenger journeys:
 - ▶ Preliminary figures published by the National Transport Authority (NTA) indicate an increase of 6% in journeys taken on public transport in Ireland in 2025, approximately 20 million additional trips.^[13] This appears to reflect the successful roll-out of additional services such as the Transport for Ireland Local Link and Go-Ahead Ireland routes.
 - ▶ Total passenger journeys (by bus, Dublin metro bus, rail and Luas) captured by the Central Statistics Office^[14] in 2025 remained largely unchanged (326.5 million passengers) relative to 2024^a (327.6 million passengers), a potential indication that these public transport services are operating at near capacity.
 - ▶ Transport for Ireland Local Link services, including scheduled fixed-route services and demand-responsive transport, recorded 6.97 million passenger journeys in 2025, which is a 19% increase from 2024.^[13]

^a 2024 was a leap year on a working day; therefore, that year included 1 extra day of journeys.



- ▶ According to the European Alternative Fuels Observatory, Ireland had a fleet of 308 electric buses in 2025, compared with 282 electric buses in 2024.^[15] The Climate Action Plan has a target of 1,500 EV buses in the Public Service Obligation bus fleet by 2030.
- ▶ A total of 7 out of 11 phases of the redesigned BusConnects network have been implemented and are now operational.^[16]
- ▶ In 2025, a projected 180,800 students are estimated to have been enrolled in the School Transport Scheme, an increase of 4.8% from 2024, which aligns with the planned expansion of the scheme.^[17]
- ▶ Active modes of transport, i.e. walking and cycling, accounted for a reported 20% of journeys in 2024, an increase from the 18.7% baseline, and compared with the target of 28% by 2030.^[18]
- ▶ The NTA Walking and Cycling Index 2025 found that active travel avoided up to 660,000 car trips each day across the five metropolitan areas (Dublin, Cork, Galway, Limerick, Waterford).^[19]
- ▶ Approximately 1,000 km of active travel and greenway infrastructure was delivered between 2020 and 2025,^[20] with 40% of projects outside the Greater Dublin Area,^[21] and a further 200 km is expected to be delivered in 2026.^[22]
- ▶ Annual funding for active travel has been maintained at €360 million under the National Development Plan's Transport Sectoral Plan to 2030.^[23]

Resilient transport network

- ▶ The damage and disruption caused to the road and rail network by Storm Chandra and the prolonged rainfall in January and February 2026 exposed the vulnerability of Ireland's transport infrastructure to heavy rainfall events compounded by coastal overtopping and prolonged periods of preceding rainfall.
- ▶ The Council is disappointed by the continued delays in the publication of the National Ports Policy and the lack of a coordinated approach to climate-resilient planning across ports.



Key recommendations

Fossil fuel crisis

1. In response to the current fossil fuel crisis, the Government introduced a suite of temporary emergency measures to alleviate the immediate adverse impact on the economy. Concerns have been raised regarding the regressive nature of some of the temporary measures.
 - a. The Council strongly recommends that the Government address the regressive components of the emergency measures and introduce targeted emergency measures within the Transport sector to support the most vulnerable in society, and across the economy to reduce demand for and transition away from fossil fuels.
 - b. The Government should maintain the planned trajectory of the carbon tax and continued ring-fencing of revenues to support climate action, including targeted measures for the most vulnerable.

Public transport network

2. The Department of Public Expenditure, Infrastructure, Public Service Reform and Digitalisation (DPENDR) should increase the allocation of funding to the operation of existing Public Service Obligation public transport services in Budget 2027 to increase the capacity, reliability and frequency of the bus and rail networks.
3. As per the Climate Change Advisory Council's recent letter to the Minister for Transport, the Department of Transport and DPENDR should accelerate and adequately fund the delivery of priority public transport projects, including DART+ South West and Luas Finglas, and establish a robust pipeline of public transport investments extending to 2040 to support modal shift, reduce chronic congestion, achieve emissions reductions and provide long-term planning certainty.
4. As per the Council's letter, the Department of Transport and DPENDR should accelerate delivery of the NTA's Park and Ride Investment Programme, together with sustained funding for the public transport services and fleet. Planning for park and ride facilities across all five cities should be advanced and supported by reliable, frequent and affordable public transport services with integrated ticketing.

Electric vehicle uptake

5. Targeted measures should be designed by the Department of Transport and Sustainable Energy Authority of Ireland and rolled out to increase EV uptake by lower income households, particularly in areas with limited access to public transport and high rates of forced car ownership. These supports should improve affordability,



for example through modified grants, scrappage schemes, social leasing schemes, preferential financial instruments, e.g. low- or zero-interest loans, and/or tax incentives.

6. To enable more reliable EV journey and charging planning, the Department of Transport should advance publicly accessible mapping of the static and dynamic information gathered under the Alternative Fuels Infrastructure Regulation on public EV charging points, including those that are privately operated. In addition, setting robust industry standards for the operation and reliability of charging points is important to increase public trust in the reliability of charging infrastructure. This could include disclosure of uptime and outages relative to a standard set of key performance indicators.
7. The Department of Education and Bus Éireann, supported by the Department of Transport and Zero Emission Vehicles Ireland, should actively promote the transition to zero-emission vehicles in the School Transport Scheme. Additional charging infrastructure in support of an expanded electric school transport fleet may need appropriate incentives to be put in place.

Resilient transport network

8. The Department of Transport should finalise and publish the updated National Ports Policy, ensuring that adaptation and climate risk planning are fully mainstreamed to guide the operations, planning, infrastructure investments and decision-making of commercial ports. Each port should be required to adapt to extreme weather events and sea level rise.
9. To increase the resilience of local and regional roads, the Department of Transport, in collaboration with DPENDR, should review the annual programme of regional and local road grant allocations with a view to identifying effective solutions for increasing investment and the deployment of technologies and approaches to enhance the climate resilience of regional and local roads. At the national level, Transport Infrastructure Ireland should conduct a vulnerability mapping exercise and update drainage-related asset management guidance and design manuals for national roads so that they reflect National Climate Change Risk Assessment data and recent research on the effectiveness of current drainage design standards in withstanding future rainfall volumes.
10. Iarnród Éireann and the Department of Transport should ensure that comprehensive and decision-grade climate risk assessments and climate proofing measures are undertaken for major projects prioritised under the Rail Project Prioritisation Strategy and for vulnerable sections of the rail network.



1. Introduction

The Transport sector is the second-largest source of greenhouse gas emissions in Ireland,^a accounting for 21.8% of total national emissions in 2024,^[2] and is projected to contribute 20.6% of Ireland’s total emissions in 2030 under the ‘with existing measures’ (WEM) scenario. Emissions in the sector have remained relatively stable in the last 4 years, with emission reduction measures being counteracted by increasing levels of transport demand.

Emissions for the sector were 11.8 Mt CO₂ eq in 2024, a decrease of 1.3% compared with 2023 (11.9 Mt CO₂ eq). Passenger cars accounted for 51% of road transport emissions in 2024, followed by heavy goods vehicles (HGVs) and buses at 31%,^b and light goods vehicles (LGVs) at 18%.^[2]

2. Sectoral emissions ceilings and Climate Action Plan targets

The Transport sector has been set an ambitious sectoral emissions ceiling (SEC), with emissions levels needing to fall by 50% relative to 2018 levels by 2030. These emissions ceilings are 54 Mt CO₂ eq for the first carbon budget period (2021–2025; see Table 1) and 37 Mt CO₂ eq for the second carbon budget period (2026–2030).

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

(Sources: EPA Final Greenhouse Gas Emissions 1990–2024,^[2] EPA Greenhouse Gas Emissions Projections 2025–2030.^[24])

Carbon budget period	SEC	Reported emissions, 2021–2024	SEC used, 2021–2024	Projected emissions, 2025	Projected exceedance
2021–2025	54 Mt CO ₂ eq	46.8 Mt CO ₂ eq	86.7%	11.6 Mt CO ₂ eq	4.4 Mt CO ₂ eq

Table 2 assesses progress against a number of indicators, including key performance indicators (KPIs) set out in the Climate Action Plan 2024 for 2025 and 2030. A number of improvements could be made to these KPIs in the next Climate Action Plan, including:

- ▶ improved consistency between stock and flow indicators for fleet electrification,
- ▶ greater clarity on the fleet electrification target including battery electric vehicles (BEVs) only,
- ▶ more detailed and measurable targets for public transport electrification,
- ▶ additional KPIs for public charging, connectivity of public transport and active travel infrastructure delivery.

a After the Agriculture sector.

b Emissions for heavy duty vehicles include those from both HGVs and buses. These are not disaggregated in the greenhouse gas inventory.



Nevertheless, it is clear that there remains a significant gap to target across the range of existing KPIs at this time.

Table 2: Progress on key Climate Action Plan targets as at the end of 2024.

(Sources: Central Statistics Office (CSO);^[14] 1, SEAI;^[25] 2, CSO (Dublin Bus, other buses, rail and Luas);^[26] 3, CSO TTM02;^[9] and 4, European Alternative Fuels Observatory (EAFO).^[15]) There is a small discrepancy between CSO and EAFO data, which relates to different definitions of private versus passenger electric vehicles. Progress towards the 2025 target for electric vehicles was assessed based on the CSO definition of private electric vehicles. EV, electric vehicle; PHEV, plug-in hybrid electric vehicle; PSO, Public Service Obligation.

Year	Fuel deliveries (vs 2018) ¹	Passenger journeys by public transport (vs 2019) ²	Fleet electrification (private BEVs/ PHEVs) ³	Fleet electrification (passenger BEVs/ PHEVs) ⁴	Fleet electrification (electric buses) ⁴	Fleet electrification (commercial BEVs) ⁴
2022	-4.7%	+2%	36,002 BEVs; 33,157 PHEVs	35,713 BEVs; 25,318 PHEVs	13	2,227
2023	-4.1%	+26%	57,730 BEVs; 46,277 PHEVs	57,367 BEVs; 35,785 PHEVs	61	3,205
2024	-2.6%	+38%	76,033 BEVs; 64,594 PHEVs	72,640 BEVs; 41,933 PHEVs	282	5,316
2025	Not available	+38%	101,567 BEVs; 91,753 PHEVs	95,123 BEVs; 60,600 PHEVs	308	7,302
2025 target	Not applicable	+125,000 sustainable journeys	175,000 passenger EVs		300 EV buses in PSO bus fleet	20,000 commercial EVs
2030 target	50% reduction	130% increase in daily public transport journeys	845,000 passenger EVs		1,500 EV buses in PSO bus fleet	95,000 commercial EVs

3. Indicators

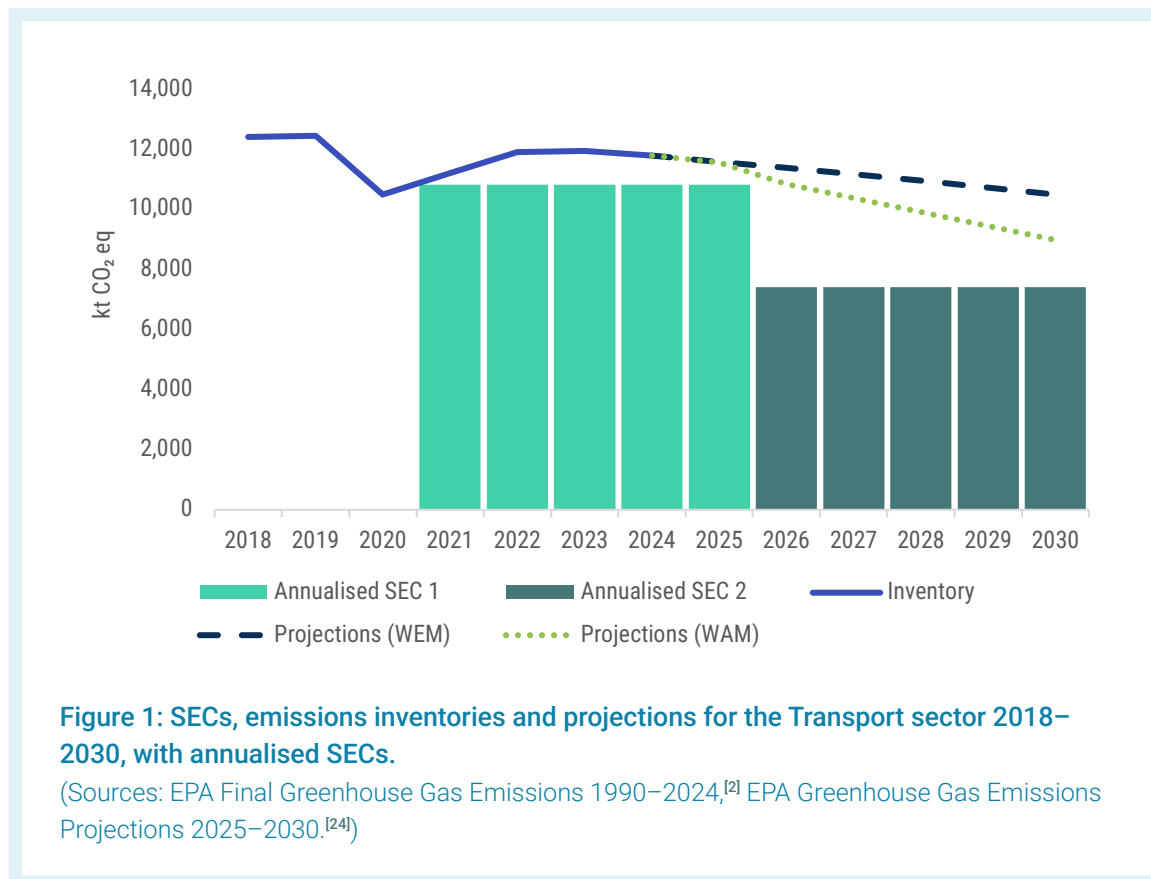
3.1. Transport emissions and main trends

Emissions for the sector were 11.8 Mt CO₂ eq in 2024, a decrease of 1.3% compared with 2023^[2] (11.9 Mt CO₂ eq), as shown in Figure 1. In 2024, a 16.8% increase in the use of biofuels, largely through blending with petrol and diesel, contributed the majority of the emission reduction. The most recent Environmental Protection Agency (EPA) projections show that, under the ‘with additional measures’ (WAM) scenario, the Transport sector is projected to exceed its 2021–2025 SEC by 4.4 Mt CO₂ eq and its 2026–2030 SEC by 12.5 Mt CO₂ eq.

Failure to meet targets in the Transport sector has implications for compliance costs for the Effort Sharing Regulation and the Renewable Energy Directive, as outlined in the Climate Change Advisory Council’s (CCAC’s) joint paper with the Irish Fiscal Advisory Council.^[27] The consumption of energy



from renewable sources in the Transport sector in Ireland (renewable energy share in transport (RES-T)) was 8.7% in 2024, an increase from 7.6% in 2023.^[4] The target for RES-T within the revised Renewable Energy Directive (REDIII) is 29% for Member States by 2030. The most recent Sustainable Energy Authority of Ireland (SEAI) projections estimate a 16% RES-T share by 2030 under the WEM scenario and a 17% share under the WAM scenario.^[28]



3.2. Transport resilience indicators

A framework for climate adaptation indicators was published in 2024,^[29] commissioned by the EPA and co-developed with Transport Infrastructure Ireland (TII), with a focus on the national roads and light rail subsector. This framework provides a structured and practical approach to the identification, testing and implementation of adaptation indicators, supported by an agreed set of indicators and key methodological lessons.

The second iteration of the Transport Sectoral Adaptation Plan (T-SAP II), published on 11 December 2025,^[30] builds on the work of TII and seeks to expand indicator development to address critical gaps and support application across the wider Transport sector. A set of 13 core resilience indicators was developed to support monitoring of progress against the adaptation actions set out in the plan, alongside commitments to develop additional indicators and a publicly accessible dashboard to provide quantitative updates on implementation, informed by these indicators.



4. Progress on previous Climate Change Advisory Council recommendations

4.1. Avoid–Shift–Improve framework

The Council has repeatedly called for measures to manage and reduce transport demand, including integrated spatial and mobility planning to support compact growth and limit urban sprawl; measures to drive behavioural change and modal shift, such as road pricing (e.g. congestion charges and low-emission zones), parking restraints and fuel pricing; improvements in the accessibility and reliability of public transport services and active travel infrastructure; and expansion of the School Transport Scheme.

The Moving Together strategy^[31] was finally published in March 2026, nearly 2 years after the draft was published for public consultation.^[32] It provides the policy approach for the ‘avoid’ component of the ‘Avoid–Shift–Improve’ framework and includes 32 recommendations and an implementation plan. The strategy commits to strengthening policy alignment and implementation mechanisms with the revised National Planning Framework to deliver compact growth and sustainable mobility. This is in line with previous Council recommendations.

The Council also made recommendations for targeted changes to taxation in the Transport sector to better support emissions reduction, and a broader review of the taxation framework to ensure that it is aligned with climate objectives. The extension of vehicle registration tax (VRT) relief for electric vehicles (EVs) in Budget 2026, along with preferential benefit-in-kind rates for zero-emission, employer-provided cars and continued temporary reductions in the original market value used to calculate benefit-in-kind rates, are positive steps and in line with previous Council recommendations to support EV adoption. These incentives are also increasingly complemented by private sector finance options, including green loans and personal contract purchase contracts, which are now widely available through banks, credit unions and car dealerships, offering reduced interest rates for the purchase of new and second-hand EVs.^[33,34]

The commitment in the Moving Together strategy to review the current range of transport taxes and charges, including VRT, motor tax, excise, carbon tax, tolls and VAT by Q2 2027 is strongly welcomed. The strategy indicates that this review is intended to assess fiscal measures based on their proven capacity to drive behavioural change, while also considering the potential impacts on the Exchequer identified in analysis by the Parliamentary Budget Office^[35] and the Irish Fiscal Advisory Council.^[36]

Analyses indicate that the shift to lower-emitting vehicles, particularly EVs, will severely challenge the revenue base across fuel excise duties, motor tax and VRT. In this context, it is essential that any emerging reforms to transport taxation support emissions reduction and do not create unintended financial disincentives to EV uptake. Progress on EV uptake will be discussed further in *Section 5.3*.

The Council has also recommended congestion charges as an effective demand management measure, yet the finalised strategy does not include an action to develop the legislation required to enable the introduction of congestion charging in Ireland. This represents a notable departure from the draft strategy published for public consultation in April 2024. In January 2026, the Minister for Transport confirmed in response to a parliamentary question that there are ‘no plans to legislate for congestion charging’.^[37] The strategy instead proposes locally tailored demand management strategies, supported by guidance and modelling for local authorities, together with a review of existing legislation in 2026 to ensure that powers are sufficient to bring forward demand management measures.



The finalised strategy does acknowledge that the Commission on Taxation and Welfare, in its Foundations for the Future report published in 2022,^[38] also recommended the introduction of congestion charges as a tool to not only change behaviour by shifting people to public or active transport, but also offset the decline in the yield of taxes on fossil fuels as the transition to EVs continues. The absence of a commitment to develop the legislation required for congestion charges may represent a missed opportunity to reduce transport demand while also providing short- to mid-term fiscal resilience.

The Council has made a number of recommendations supporting both the expansion of the School Transport Scheme and reduced fares. Participation in the scheme continues to increase, with more than 180,800 students being transported in the 2025/26 school year,^[17] up from approximately 172,500 in 2024/25.^[17] This growth has been supported by substantial fare reductions introduced through a February 2023^[39] cost-of-living package and subsequently maintained in Budgets 2024 and 2025.^[40,41] There was a €69 million uplift in funding for the scheme announced in Budget 2026, to provide for additional demand from pupils with special educational needs, increased contractor running costs and the implementation of e-ticketing.

A recent decision to double the fare for primary students in the 2026/27 school year, and to increase the fare by a third for post-primary students,^[42] risks undermining progress made in recent years. Journeys to places of education are a significant driver of transport demand in Ireland.^[43] Census 2022 data indicate that more than half of students travel to places of education by car. In this context, it is essential that changes to fares do not reduce uptake of the scheme, but instead support its continued expansion, including the objective set out in the School Transport 2030 review of enabling an additional 100,000 students, relative to 2024 levels, to use the scheme by 2030.^[44] The impact of these fare increases on participation should be closely monitored and any adverse effects on uptake should be addressed promptly.

The Council has also previously emphasised the need for continued investment in public transport services to improve accessibility and reliability. The 43% increase in Public Service Obligation (PSO) funding allocated in Budget 2026^[45] will continue to support subsidised bus and rail services across Ireland, alongside further targeted affordability measures, including expanded free child fares on PSO services for children aged 5–8 years^[46] and the introduction of a free travel companion pass for all over-70s from September 2025.^[47]

The latest 3-year progress report on the National Sustainable Mobility Policy (SMP), published in September 2025,^[20] also points to important progress in a number of areas. It states that 41.3% of the PSO bus fleets in Cork, Galway, Limerick and Waterford are now low- and zero-emission vehicles, surpassing the 2025 target of 40%, with Limerick becoming the first city in Ireland to have a fully electric fleet.^[20] The progress report also confirmed that 922 km of cycling infrastructure and 762 km of walking infrastructure are under development, approximately 40% of which is outside the Greater Dublin Area, surpassing the target of 100 km of active travel infrastructure under construction by the end of 2025. However, there are delays in the delivery of the charging infrastructure required to support operation of the zero-emission public bus fleet. The SMP progress report noted that an additional 66 zero-emission buses were ready for deployment pending infrastructure upgrades.^[21]

Progress has also been reported in relation to new light rail services in Cork, with the preferred route for Luas Cork launched for public consultation in April 2026.^[48] Phase 1 of the Cork Area Commuter Rail Programme, originally due for completion in 2025, is delayed and is now expected to be completed in 2027.

The second SMP Action Plan covering the period 2026–2030 was published in March 2026 and includes 95 actions over a range of areas, including infrastructure, services, spatial planning,



behaviour change, accessibility and data.^[49] It is important that the Government ensures that implementation of this plan proceeds in a timely and comprehensive manner.

4.2. Adaptation and resilience

The Council has previously emphasised the need to strengthen the climate resilience of Ireland's ports, calling for the urgent publication of the revised National Ports Policy.^[43] The revised National Planning Framework indicated that a new draft of the National Ports Policy would be presented to Government in 2025 following consultation; however, this is delayed. The Minister for Transport, in response to a parliamentary question in March 2026,^[50] confirmed that the draft policy would be published for public consultation in the first half of 2026. The finalised draft will follow thereafter with no firm timeline for delivery.

The Council's 2025 Transport Annual Review highlighted the extensive damage caused by Storm Darragh to Holyhead Port in December 2024 and the substantial and prolonged impact of this on freight and passenger services. Severe damage caused by Storm Bram to the Dublin Bay Great South Wall in December 2025 also revealed Ireland's aged coastal protection infrastructure and the vulnerability of Dublin Port to extreme weather events.^[51] This underscores the urgency of finalising the National Ports Policy to ensure that all ports take a harmonised approach to the integration of climate risks, including cross-border and transboundary impacts, in port planning, operations, infrastructure investments and decision-making. Irish ports form a key component of the national infrastructure for trade, travel and renewable energy ambitions. They provide a critical travel mode option for a small, highly open economy.

The Council has also recommended that critical roads and railways vulnerable to flooding should be identified and prioritised for climate proofing measures. A total of €16.5 million was allocated for 294 projects in 2026 under the Climate Change Adaptation and Resilience Programme, as part of the Department of Transport's investment programme for regional and local roads.^[52] These include flood alleviation works, drainage remediation, land slippage works, pumping infrastructure and tidal protection projects. This allocation is unchanged from 2025 and remains significantly below the €23 million invested in 2021.^[53]

For context, the eight worst-hit local authorities required €59 million for repairing regional and local roads damaged by Storm Chandra,^[54] demonstrating the risk of underfunding within the regional and local roads investment programme. This is being compounded by increasingly severe rainfall and extreme weather events and rising costs for repair and maintenance materials due to the impacts of the conflict in the Middle East.^[55]

TII published its Climate Adaptation Implementation Plan for National Roads 2026–2030^[56] in February 2026. This sets out TII's approach to developing a more resilient road network informed by the latest climate projections. It identifies 20 targeted measures for the national road network to be delivered by 2030, including vulnerability mapping, updating flood hazard data, a sea level rise and storm surge study, and planning for a long-term programme of network drainage upgrade works. In the rail sector, Iarnród Éireann completed the second non-statutory consultation for the Dublin to Rosslare section of the East Coast Railway Infrastructure Protection Projects in October 2025, aiming to enhance coastal protection for five vulnerable sections of rail infrastructure between Dublin and Wicklow.^[57]

These are important developments but also represent relatively early-stage adaptation efforts and highlight the urgent need for a sustained increase in investment in adaptation, along with timely implementation of targeted measures, to ensure that all critical and vulnerable roads and railways are adequately prepared for present and future climate impacts.



In its 2025 Transport Annual Review, the Council recommended planning and support to realise the potential of vehicle-to-everything (V2E) technology,^[43] noting that this can increase resilience in rural areas during power outages by providing temporary off-grid support while the main grid is being restored, and also potentially enhance grid stability and the reliability of renewable energy integration. In February 2026, the Minister for Transport launched the Draft National EV Charging Infrastructure Strategy 2026–2028 for public consultation.^[58] This confirms that research is ongoing in relation to bidirectional charging to identify the impact on EV batteries and that this will inform planning for EV infrastructure development and design.

The draft strategy notes that approximately 80% of all EV drivers in Ireland primarily charge their EVs at home. However, most current home charging systems registered by SEAI are not yet vehicle-to-grid (V2G) or vehicle-to-home (V2H) ready, and future updates to the SEAI register and grant schemes will need to reflect the growing importance of these technologies. The Department of Transport is due to commence a review of the regulatory structures around EV charging infrastructure in 2026, with a key focus on V2G integration and readiness.

The Alternative Fuels Infrastructure Regulation (AFIR) requires all new and refurbished public chargers and new private chargers to support key functions such as smart charging and bidirectional power flow from 1 January 2027.^[59] In this context, and to avoid unnecessary delays in bringing the resilience benefits that V2E charging can provide, it is important that the Government finalises the draft EV Charging Infrastructure Strategy without delay, and that the Department of Transport concludes its regulatory review in sufficient time to support any policy, regulatory or technical changes needed ahead of the deadline in January 2027.

5. Analysis and discussion

5.1. Fossil fuel crisis and climate action

Ongoing instability in global fossil fuel markets continues to expose Ireland to fossil fuel price volatility and supply risks, reinforcing the importance and benefits of decarbonisation and transition away from fossil fuels. As observed in April 2026 by the European Commission, ‘Since the escalation of the conflict in the Middle East, the EU has spent an additional €24 billion on energy imports due to higher prices – without receiving a single extra molecule of energy’.^[60]

The EU Commission, in response to a request from the March 2026 EU Council conclusions, proposed the AccelerateEU toolkit, which includes a number of measures to help mitigate the impact of the crisis. In particular, the Commission proposed that measures be ‘timely, targeted and temporary ... Protecting consumers, including industry, from price peaks can include targeted income support schemes, energy vouchers and social leasing schemes, lowering excise duties on electricity for vulnerable households’.

The Commission also proposed the adoption of the Middle East Crisis Temporary State Aid Framework (METSAF), which will provide additional flexibility for national governments, including emergency measures to support the most exposed economic sectors.^[60] The METSAF will be in place until 31 December 2026.^[61] In May 2026, the Commission published the AccelerateEU Catalogue, which is a ‘living document’ outlining best practice examples of measures being taken across Member States in response to the fuel crisis.^[62]

Within the Transport sector, rapid increases in fossil fuel prices can cause particular hardship and stress for specific vulnerable cohorts and commercial enterprises that have high dependency on private vehicles and limited opportunity to reduce demand or transition away from internal combustion engine (ICE) vehicles in the short term. It is imperative that measures to alleviate



this stress are targeted at those most in need of relief, while enabling action to reduce emissions where feasible.

In response to the market volatility linked to conflict in the Middle East, the Government introduced temporary measures for the Transport sector, which include:

- ▶ reduced excise on petrol and diesel,
- ▶ adjustment to the Diesel Rebate Scheme,
- ▶ reductions to the National Oil Reserves Agency levy,
- ▶ the new Road Transporters Support Scheme.

The temporary measures are intended to provide necessary supports to address highly volatile fossil fuel prices. However, these measures do not aim to reduce demand and do not address the underlying dependence on fossil fuels and exposure to price volatility and supply risks. The temporary measures dilute the impact of the price signal, which otherwise would incentivise decarbonisation and promote long-term resilience, particularly in the freight sector. The excise reductions mean that the combined excise (mineral oil tax and carbon tax) on diesel is charged at the lowest rate since 2010, at €0.37 per litre (see [Figure 2](#)).

Excise on petrol, at €0.50 per litre, is just above the minimum rate of €0.47 per litre, charged during the initial stages of the Ukraine crisis in 2022. Nevertheless, prices at the pump were high as of March 2026 – diesel was €2.05 per litre and petrol was €1.88 per litre, compared with maximum prices of €2.09 per litre for diesel and €2.14 per litre for petrol in July 2022, following the Russian invasion of Ukraine.^[63] The reduction in excise mitigated some of the fuel price volatility at the pump; however, the reduction means less revenues accrued by the Government, leading to potential budgetary shock.

As noted by the Economic and Social Research Institute (ESRI), ‘any budgetary shock is likely to put pressure on [Ireland’s] ability to deliver on the longer-term infrastructure deficits’.^[64] While the increase in fuel prices means that the price signal to reduce demand is strong, price elasticity of demand for transport fuels is known to be low in the short term.

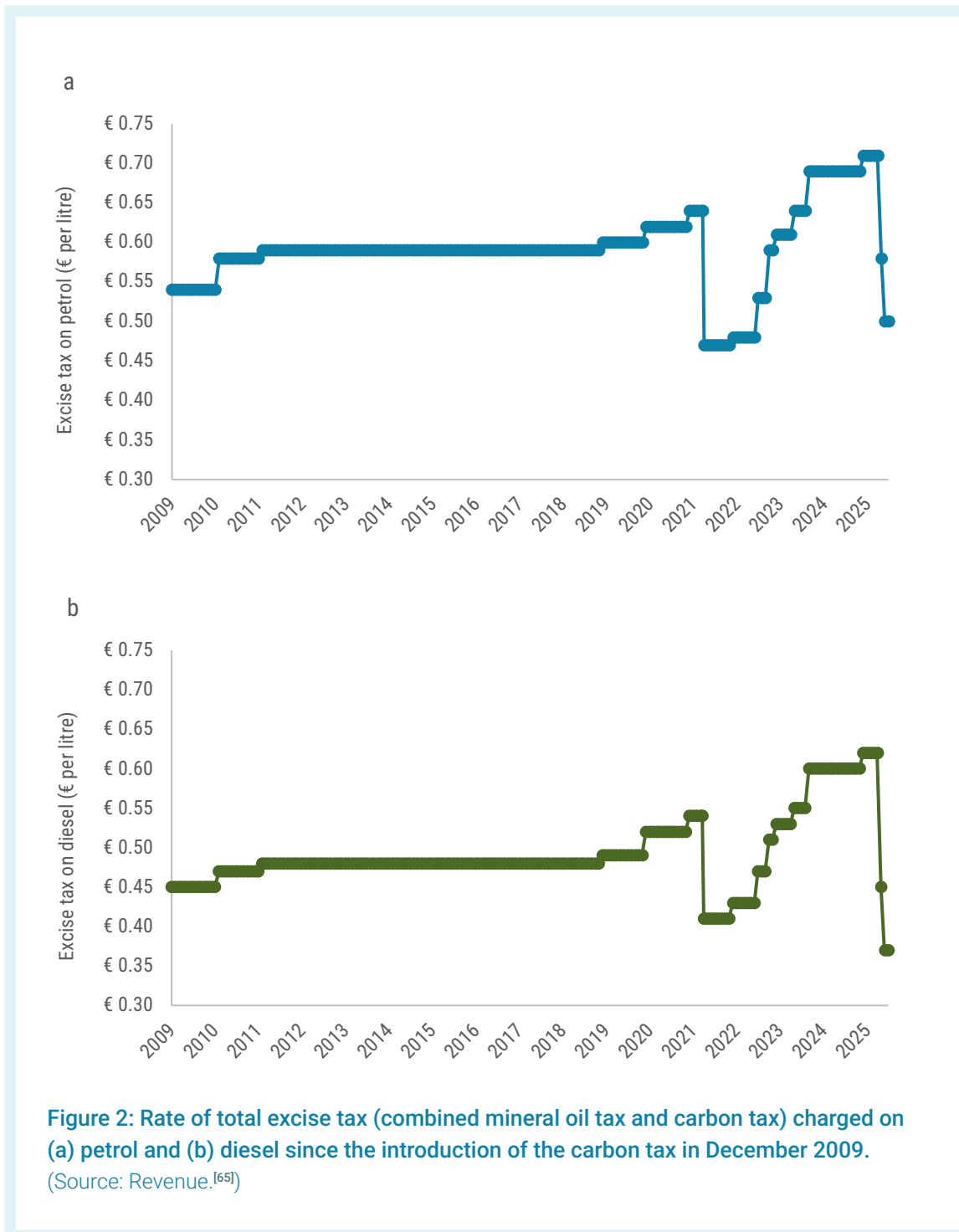
Previous ESRI research that was undertaken at the start of the Ukraine crisis in 2022 found that high-income households benefited from most of the cost to the Exchequer of the measures introduced at that time to address the impact of increased energy costs.^[65] Furthermore, the authors found that if the objective is to protect those most affected by rising energy prices, cutting indirect taxes is a poorly targeted response, given that most of the revenue is spent compensating high-income households that have been least affected.

In its submission to the Budgetary Oversight Committee in May 2026, ESRI observed that ‘the current measures will benefit lower income households more than higher income households in percentage terms. However, in absolute terms, higher income households are likely to benefit more, a consequence of the untargeted nature of excise cuts, which reduce prices paid by all consumers’.^[64] A recently published ESRI report shows that well-targeted interventions to address energy poverty can provide more effective support to those most in need at a much lower cost than universal measures.^[67]

The ESRI has again recommended against cutting indirect taxes on energy products due to poor targeting and adverse incentives. Universal measures like energy credits are better targeted than indirect tax cuts, but the energy credit amount may not be sufficient for the most vulnerable, and substantial resources are inevitably directed to households with little or no need for assistance.



The integration of supports with broader social protection ensures better targeting; for example, increases to welfare payments are more targeted because they are means-tested, and increasing the Pay Related Social Insurance credit is more targeted at lower earners and renters. Therefore, emergency measures should be targeted and explicitly temporary, with a clear distinction between such measures and longer-term structural reforms.



Reliance on fossil fuels, the prices of which are subject to high volatility, leaves households and businesses exposed in the long run and has the potential to reduce economic growth in an oil-



importing country such as Ireland. Additionally, if the recently introduced measures are not unwound in a timely manner, they will hinder Ireland's ability to reduce energy demand and also disincentivise the uptake of sustainable energy technology.^[64] A prolonged crisis will require the Government to review the effectiveness and cost of the temporary measures. The Council urges the Government to adopt more targeted and efficient measures over time and recommends the appropriate removal of the regressive measures.

5.1.1. Fossil fuel demand reduction

The International Energy Agency's (IEA's) 2026 Energy Crisis Policy Response Tracker outlines international government actions to conserve energy and support consumers in response to the energy market impacts of the conflict in the Middle East,^[68] with the highlighted transport measures including limiting vehicle use, rationing fuel, lowering speed limits and promoting public transport. The recently published AccelerateEU Catalogue^[62] outlines best practice examples of measures that EU countries can implement to reduce their oil and gas consumption in the short term, increase their clean energy production and save energy.

This catalogue of measures highlights the need for timely, targeted and temporary support measures that are aligned with long-term energy transition goals and the phase-out of national subsidies for fossil fuels. The introduction of affordable national public transport passes in both Spain and Germany and the launch of a national carpooling plan in France were highlighted as examples of clean and affordable mobility solutions. In addition, several countries have introduced purchase incentives and tax benefits for EVs. For example, Sweden increased funding for EV purchases (targeting low-income households in certain regions) and boosted public sector procurement of fossil-free fuels and electric alternatives.

Other novel demand reduction options that can immediately reduce road transport fuel demand include working from home, alternate private car access to roads in large cities on different days, efficient driving practices and reducing speed limits.^[69] Reducing speed limits is a tried and tested policy response in many countries. A 10 km/h reduction in speed can cut an individual driver's fuel use by 5–10%. Heavy freight trucks save less fuel from a 10 km/h speed reduction due to their already lower speeds and because they use highways much more on average; however, each heavy freight truck can still cut fuel use by around 5% when applying such a measure, which can be easily enforced with speed-limiting devices.

Stefaniec *et al.* (2024) showed that moderate levels of working from home (avoiding 25% of commuter journeys) have the potential to reduce transport demand and emissions in an Irish context.^[70] This is reinforced by IEA^[71] recommendations identifying working from home as an effective measure to reduce transport demand in the current crisis.

Cassidy and de Bruin (2025) note that carbon pricing is widely recognised as a cornerstone of climate policy, but the Transport sector has proven less responsive than others to price signals due to the long capital lifetimes of vehicles and low short-run elasticities.^[72] This constraint on fossil fuel demand reduction in the Transport sector is particularly entrenched within high-car-dependency households and road freight.

In addition to the AccelerateEU Catalogue and the IEA tracker, the Government has already developed a number of plans and strategies to reduce Ireland's dependence on fossil fuels; important components of these plans should be expedited in response to the current crisis.^[73] For example, with the Moving Together strategy, the Government has already identified several effective measures for demand reduction in the Transport sector that can be deployed in a timely manner in



response to the current crisis and would have long-term benefits in terms of emissions reduction. These measures include the following:

- ▶ The public sector can lead by example by expediting the development of smarter travel plans aimed at reducing demand (Recommendation 22).
- ▶ Third-level institutions can support demand reduction, leading on sustainable mobility by reducing private car use among staff and students (Recommendation 24). This could be informed by the Bike to Work scheme and potentially a Bike to College scheme discussed in *Section 5.5*.
- ▶ Demand reduction through enhanced support for active and sustainable travel for school children can reduce car dependency and embed low-carbon travel habits (Recommendation 25).
- ▶ At the community level, collaboration with sporting organisations can help reduce car travel to training and fixtures through shared transport (Recommendation 26).
- ▶ In the tourism and events sector, working with operators and public transport providers to increase the proportion of visitors travelling by sustainable modes can significantly reduce emissions from discretionary travel (Recommendation 28).
- ▶ Improved consumer awareness around car ownership costs and emissions, alongside clearer guidance on EV choices, can support lower-emissions transport decisions while avoiding unnecessary car ownership (Recommendation 30).

5.1.2. Carbon pricing and taxation

The Council has strongly recommended^[74] maintaining the carbon tax trajectory, with the objective of implementing a carbon price of €100 per t CO₂ eq by 2030. Following the Government's commitment to hypothecate additional revenues from the carbon tax, an increasing proportion of these revenues are allocated to climate action, including to support vulnerable households and decarbonisation/energy efficiency measures. Maintaining the carbon tax trajectory serves both climate and social objectives by reinforcing long-term decarbonisation price signals while providing a stable funding source for decarbonisation. Since 2020, the Transport sector has provided 57%^[75] of the revenues under the carbon tax but has been allocated only 3.5%^c of total carbon tax. The Council recommends that a greater proportion of carbon tax revenues be directed towards transport decarbonisation measures.

In addition, the maintenance of the carbon tax trajectory is particularly important given Ireland's notified derogation to the Emissions Trading System 2 (ETS2) for the period 2027–2030. This derogation is explicitly contingent on the carbon tax continuing to deliver a carbon price that is equivalent to or higher than the average ETS2 allowance price. The derogation^[76] allows Ireland to maintain full control over the revenues generated from carbon pricing within the Transport sector. If the carbon tax trajectory is not maintained and falls below the average ETS2 auction rate, Ireland will no longer be exempted from the obligation to surrender ETS2 allowances.

^c Since the introduction of the carbon tax trajectory in 2020, the Department of Transport allocation of the ring-fenced funds has remained static at €20 million per year, supporting greenways/urban cycling (€9 m) and providing grants for EVs (€8 m) and EV charging infrastructure (€3 m).



It is worth noting that, under the EU Social Climate Fund Regulation, funded by ETS2 revenues, Member States can proceed to draw down additional funding for climate action from the beginning of 2026.^[76] Each Member State was obliged to submit a Social Climate Plan (SCP)^d to enable the draw-down of these funds by 30 June 2025. SCPs operate over the period 2026–2032, with up to €884 million available to Ireland, of which Ireland can recoup up to €663 million from EU resources. Ireland has not yet submitted its SCP,^e although a public consultation was held in late 2025. This provides an opportunity to refocus the plan towards actions supporting transition for vulnerable cohorts informed by insights from the current fossil fuel crisis.

The Council has repeatedly highlighted the need to review motor taxation and to equalise excise tax on diesel and petrol. However, the Council acknowledges that the fossil fuel crisis is currently acting as a signal to transition similar to the function of carbon pricing, but without the benefit of generating revenues to support decarbonisation. The Council is, therefore, of the view that the equalisation of excise should be considered once the current temporary crisis measures are unwound, noting that current excise rates are at or near their lowest values since 2010 (Figure 2). Equalisation should be introduced in a gradual manner, supported by clear communication, aligned with longer-term climate goals and set within an existing fiscal taxation policy framework.

5.2. Public transport

5.2.1. Public Service Obligation funding

The provision of public transport is a critical component for Ireland to achieve its climate targets, particularly given the country's current high level of car dependency. Investment in improving public transport will enable a reduction in car dependency and is consistent with the Avoid–Shift–Improve paradigm for emissions reduction. Public support for greater investment in public transport is high, with the Climate Change in the Irish Mind survey indicating that 75% of respondents are strongly supportive.^[77]

In 2025, the National Transport Authority (NTA) indicated an increase of 6% in journeys taken on public transport in Ireland, representing approximately 20 million additional trips, which continues the growth in public transport journeys observed over several years. This appears to reflect the successful roll-out of additional services such as the Transport for Ireland Local Link and Go-Ahead Ireland routes. However, total passenger journeys captured by the Central Statistics Office (CSO) in 2025 remained largely unchanged relative to 2024. This may indicate that large parts of the system are now operating at near full capacity (particularly at peak hours), which reinforces the case for continued investment in both the expansion and the current operational capacity of public transport.

Ireland's cities are growing increasingly congested, resulting in huge levels of public frustration, increased transport emissions, significant loss of economic productivity and negative impacts on public health and quality of life for people stuck in prolonged traffic. The TomTom Traffic Index ranked Dublin city the most congested city in Europe and third globally in 2025.^[78] The most recent

-
- d** The EU's Social Climate Fund represents the EU's most significant investment to date in protecting vulnerable households and small businesses from the costs of the climate transition. The proceeds of the fund can be used for the renovation of buildings and clean heating and cooling (e.g. heat pumps) and for the integration of renewable energy (e.g. solar panels), also in zero- and low-emission mobility and transport, including public transport.
 - e** As of May 2026, eight Member States had submitted their plans. See: https://employment-social-affairs.ec.europa.eu/policies-and-activities/funding/social-climate-fund/social-climate-fund-national-plans_en.



analysis published by the Strategic Research and Analysis Division of the Department of Transport in 2023 estimated the annual economic cost of congestion in the Greater Dublin Area at €336 million in 2022 and projected it to rise to over €1.5 billion by 2040.^[79]

Furthermore, the same analysis estimated that congestion is responsible for an average of 34% of a vehicle's total CO₂ emissions annually.^[79] The cost of congestion is also projected to rise in the regional cities of Cork, Galway and Waterford, with the forecast growth in cost particularly stark in the Galway Metropolitan Area, where the cost of congestion is projected to rise from €35.3 million in 2022 to €106.9 million by 2040.^[80]

While Ireland's per capita transport spending in 2024 was broadly comparable with that of Denmark and the Netherlands, at approximately €1,200 per capita, this masks a significant structural gap, as these countries benefit from decades of sustained investment and well-developed networks for both public and active transport.^[81,82] Higher per capita spending in Ireland is therefore justified to address long-standing infrastructure and service deficits.^[83] The increase in public transport funding in 2026 is welcome, with approximately €940 million of funding allocated in Budget 2026, representing a 43% increase on the 2025 allocation. However, much of the increase in allocation will unfortunately be consumed by rising operational costs, including fuel price inflation.

The scale of ambition required to achieve meaningful modal shift requires multi-annual commitment to enhance funding of the PSO transport system. The Council continues^[43] to support the NTA's position^[84] that multi-annual funding allocations would materially improve the planning and delivery of public transport services.

In response to the Programme for Government commitment to develop a sustainable funding model for PSO transport services and subsidised transport services,^[85] the Government established a PSO Oversight Group and plans to commission the Organisation for Economic Co-operation and Development (OECD) to carry out a review to inform approaches with regard to public transport funding, cost management and service alignment with broader policy objectives, including climate and accessibility goals.^[86] Nevertheless, it is critical that the public transport system in Ireland receives the funding required to deliver affordable, reliable and accessible services to enable modal shift away from cars.

5.2.2. Decarbonisation of public transport: electric bus fleet

Ireland's public bus fleet must transition rapidly to battery electric buses, thereby reducing public expenditure on fossil fuels for transport and supporting national climate objectives. A recent study from Sistig *et al.* (2025) evaluated the cost of public bus fleet electrification compared with operating conventional buses and found an average increase in total cost of ownership of 12% due to the capital costs of fleet replacement, requirements for additional vehicles to manage range and charging constraints, investment in depot charging and grid upgrades, and more complex driver scheduling.^[87] However, the study could not evaluate uncertainty regarding the future cost of fossil fuels or electricity. In short, the evidence suggests that while operating costs may initially increase, these can be partially offset over time through lower energy and maintenance costs as systems mature.^[87]

Ireland's public bus fleet has expanded broadly in line with population growth. Dublin Bus currently operates approximately 1,100 buses from nine depots across more than 130 routes in the Greater Dublin Area. Progress has been made in fleet electrification, with 134 electric buses in operation in Dublin as of February 2026.^[88] Under the Greater Dublin Area Transport Strategy, the target is for the urban bus fleet to be fully zero emission by 2035, which will require an estimated total fleet of 1,800 zero-emission buses. For comparison, other European cities have committed to electric or



zero-emission bus fleets in the period to 2030, including Copenhagen by 2025, Paris by 2029, and Amsterdam, Berlin and London by 2030.^[89–93]

Electrification has also progressed outside the Greater Dublin Area. Highlights include the fact that services in Limerick city and Athlone town are now fully electric.^[21] The Local Link operates five electric buses.^[94–97] However, delays in the roll-out of charging infrastructure are slowing progress. The NTA has indicated that, as of March 2026, there were 85 double-decker battery electric buses due to be absorbed into the Dublin fleet and 47 into the Galway/Limerick fleets pending installation of charging capacity at the depots.^[98]

In the CCAC's 2026 Electricity Annual Review, the Council emphasised the need to significantly strengthen Ireland's national electricity grid to support the broader energy transition. In particular, the Council recommended that the Government ensure that the Critical Infrastructure Bill, due for adoption in 2026, designates electricity grid reinforcement projects as critical for prioritisation. The reinforcement of Ireland's electricity grid is necessary to ensure that there is the necessary grid capacity to support the roll-out of charging infrastructure.

The Council reiterates its previous recommendation for more ambitious targets for progressive electrification of buses across all cities and towns, which should be set out in the next Climate Action Plan, along with a mechanism to track progress. This includes significant investment in the necessary charging infrastructure to support electrification of the public bus fleet.

5.2.3. Key public transport infrastructure projects

Capital investment in public transport infrastructure is critical to delivering modal shift, reducing congestion and emissions, and supporting compact growth while enabling transport-orientated development (TOD). In a recent letter to the Minister for Transport, the Council recommended that the Government accelerate and adequately fund the delivery of key projects, notably DART+ South West and Luas Finglas, both of which have strong TOD potential in the regions they serve and are effectively 'shovel-ready'. However, under the current National Development Plan (NDP) Transport Sectoral Plan, DART+ South West construction will not commence until post 2030 and construction of Luas Finglas will not commence until 2029. The delays in construction for these shovel-ready projects are unnecessary. The Council believes that allocation of funding to advance both projects should be expedited and strongly recommends that the Government commit funding to these projects in Budget 2027.

Delays in progressing major infrastructure projects increase costs, particularly in the current period of high inflation in the construction sector. For example, the initial business case for Luas Finglas, published in 2024, estimated a cost range between €421 million and €759 million. Subsequently, the NDP Transport Sectoral Plan, published in December 2025, estimated the cost for the same project to be in the range of €500 million to €1 billion.

The DART+ programme includes a series of interdependent elements. Delays to enabling infrastructure have had knock-on effects across the wider programme. The refusal of planning permission for the DART+ depot serving the whole network led to the decision to delay the parallel delivery of other elements of the DART+ programme. While the Council welcomes the resolution of the initial depot planning issue, it is disappointed with the decision to delay progress within the NDP Transport Sectoral Plan, given that initial planning permission was granted in November 2024 for DART+ South West.

In the same letter, the Council expressed concern with respect to progress on the Luas Finglas project, with a delay in the planning process creating uncertainty around it. However, this issue has



now been resolved, with the withdrawal of judicial review proceedings in April 2026. It is vital that this key public transport infrastructure project is now expedited.

More generally, there remains a lack of a clearly defined, sequenced and financially supported public transport project pipeline extending to 2040 and beyond. While Project Ireland 2040 envisages multiple road projects progressing in parallel at different stages of development, this approach has yet to be fully realised for public transport. The NDP Transport Sectoral Plan prioritises elements of DART+, MetroLink, a Luas extension and regional rail investment through to 2030.

A range of future projects remain outside the current delivery pipeline, including Luas extensions to Bray, Lucan and Poolbeg, Luas Cork, Luas Galway, the Navan Rail Line and later phases of the Western Rail Corridor, none of which has been assigned a timeline or confirmed delivery pathway. In contrast, road investment benefits from a more robust pipeline, with multiple projects proceeding in parallel at different stages of planning, design and construction. A comparable approach continues to be absent for public transport infrastructure.

As outlined in the 2026 Electricity Annual Review,^[99] the Council supports the accelerated development of critical infrastructure to enable the transition to renewables, and the Critical Infrastructure Bill, due for adoption in 2026, could provide a pivotal opportunity in this regard. However, the infrastructure that is enabled must not undermine Ireland's ability to meet climate change mitigation and adaptation targets.

The Council recommends that the Government ensure that the Critical Infrastructure Bill designates public transport infrastructure projects as critical for prioritisation. The Government should also provide clarity on the schedule of programmes and projects that are to be designated for prioritisation in the short term. Clear accountability, time-bound delivery milestones and regular outcome reporting for these projects that is publicly available are critical, such that time-to-decision by planning authorities can easily be tracked and, thus, the efficacy of the Bill properly verifiable by stakeholders and the public. Additionally, transparency with regard to the designation of specific infrastructure projects or programmes that the Government considers to be critical is of significant public interest.

However, the Council has raised concerns regarding Section 7 of the Bill, which allows for the disapplication of Section 15 of the Climate Action and Low Carbon Development Act 2015 in the case of designated projects and programmes.^[100] The Council reiterates its call, and support, for the speeding up of critical infrastructure delivery in Ireland. However, this objective should be achieved in a manner that is consistent with the National Climate Objective and maintains the overall integrity of Ireland's climate law and the consistency of its application. This objective was mirrored in the Programme for Government, wherein it was recognised that developing Ireland's infrastructure can go hand in hand with growing the economy and achieving ambitious climate objectives.^[85]

Furthermore, the NTA has strengthened its case for getting acceptance of a number of critical public transport infrastructure projects facing judicial review by bringing them forward under Section 15 of the Climate Action and Low Carbon Development Act 2015. The Council supports the acceleration of critical infrastructure to enable the expansion of public transport; however, the infrastructure that is enabled must not undermine Ireland's ability to meet the National Climate Objective.

5.2.4. Park and Ride

Park and ride (P&R) infrastructure represents a relatively quick and cost-effective medium-term intervention to reduce car dependency, congestion and, in turn, emissions. It supports a shift towards more sustainable transport modes. The NTA and Iarnród Éireann have responsibility for rolling out P&R facilities within their respective development strategies.



The NTA's P&R Investment Programme requires approximately €100 million by 2030 to roll out the regional P&R strategies for the Greater Dublin Area, Limerick, Galway, Waterford and Cork.^[101] Many proposed P&R sites are located on congested transport routes that are also designated for significant strategic housing development. Timely delivery of P&R infrastructure in tandem with strategic housing is a core element of TOD under the National Planning Framework and is critical to establishing sustainable travel behaviours among commuters and local communities.^[102]

In a recent letter,^[103] the Council highlighted the success of P&R schemes in cities such as Oxford and Cambridge, where high uptake has been enabled by low user costs and reliable, high-frequency services. An important feature of these successful P&R initiatives is ticket integration with public transport. To be effective, P&R facilities must have sufficient bus and rail capacity and reliable, frequent and affordable services, supported by committed multi-year funding that provides certainty to potential investors and users.

5.3. Battery electric vehicles and charging infrastructure

Ireland's dispersed settlement pattern has entrenched car dependency, and legacy car-centric investment decisions limit the scope for 'avoid' and 'shift' measures outside urban areas and for certain longer journeys. Therefore, EVs are an essential and immediate lever^[104] for reducing transport emissions to stay within the legally binding SECs. EVs offer significant co-benefits such as improved air quality and lower noise levels. The transition towards a fully electric national fleet is increasingly feasible given the rapid expansion of the EV market, with near price parity with ICE vehicles,^[105] the greater availability of smaller and more affordable models, the roll-out of home charging and an expanding national EV public charging network.^[106] Furthermore, the running, maintenance and fuelling costs for an EV are demonstrably lower than those for an ICE vehicle.^[107]

The Climate Action Plan set a target of 175,000 passenger EVs by 2025. By the end of 2025, the national fleet included 101,567 private BEVs and 91,753 private PHEVs. The Minister for Transport announced that the Climate Action Plan 2025 target for EVs had been achieved. While this represents significant progress, full decarbonisation of the fleet would also require a transition away from PHEVs. PHEVs are significantly less efficient in the real world than the official Worldwide Harmonised Light Vehicle Test Procedure (WLTP) emissions ratings metric. Mandev *et al.* (2024) suggest that long-distance driving and charging behaviour, which lead to the vehicle running on fossil fuel for long periods, are the largest non-technical factors for the deviation between WLTP type approval and real-world performance of PHEVs.^[108]

In 2023, the EU adopted legislation that requires a 100% reduction in CO₂ emissions for all new passenger cars and vans from 2035.^[109] This constitutes an effective ban on new ICE and hybrid vehicle sales post 2035. However, in December 2025, the European Commission proposed a weakening of the 2035 requirement, replacing the 100% CO₂ reduction with a 90% reduction.^[110] This would allow new PHEVs, range extenders, mild hybrids and ICE vehicles to still play a role in transport beyond 2035.

As of April 2026, the registration of new BEVs had increased significantly over the same period in 2025. A total of 15,031 BEVs were licensed between January and April, representing a 43% increase compared with the same period in 2025 (10,495) and an 83% increase relative to the same period in 2024 (8,224).^[111] PHEVs saw a 2.7% increase in the same period, from 9,569 in 2025 to 9,829 in 2026.^[111] These data show that BEVs have been more attractive to the market during the current crisis.



5.3.1. Targeted measures for electric vehicle uptake

The Council has repeatedly called for EV uptake measures to be targeted at lower income households, particularly in areas with limited access to public transport and therefore experiencing forced car ownership. While rural location and low income often overlap, the key issue is the lack of viable alternatives to private car use. The Council therefore welcomes the adoption of the Government's Moving Together strategy, which recommended a review of existing EV incentives with a focus on targeted supports for 'captive car users', i.e. those in forced car ownership.

Households with forced car ownership may face higher barriers to adopting EVs and are disproportionately exposed to rising transport fuel costs. The NTA's National Household Travel Survey assessed access to public transport across regions. It found, for example, that 29% of people in rural areas live within a 15-minute walk to a bus stop compared with 97% living in Dublin city and its suburbs. Access to rail transport is even more constrained, with only 3% of rural dwellers living within a 15-minute walk to a train station or Luas stop, compared with 51% in Dublin city and its suburbs.^[112]

Singh and Caulfield (2026) show that EV and EV home charging grants are more likely to be accessed by higher income households.^[113] Where EV household charger installation is used as a proxy for EV ownership, Caulfield *et al.* (2022) suggest that EV car ownership occurs disproportionately in Dublin and is concentrated in affluent areas.^[114] An analysis of the CSO data shows higher-than-average uptake of EVs per capita in Dublin and the commuter counties around Dublin.^[115]

From both an equity and emissions perspective, households in forced car ownership present a strong case for targeted intervention. While increased patronage and improved service under the Rural Transport Programme/Local Link are welcome developments, they may not fully meet transport needs in all cases. Charly and Caulfield (2025) found that emissions per vehicle are higher in rural areas, and that switching to an EV in rural counties could reduce emissions by up to 3.4 kg of CO₂ during a morning peak hour compared with 2.2 kg in urban areas.^[116]

As noted in the CCAC's 2025 Transport Annual Review, there are a number of EU countries that offer social leasing schemes^[117] that support people living in remote areas and those living with disabilities. Social leasing has been proposed as an initiative that could benefit from ETS2 revenue, i.e. the Social Climate Fund,^[118] and the European Commission has provided guidance to Member States on the design of such schemes as part of national SCPs.^[119]

Social leasing is also included in the AccelerateEU Catalogue as an example of a readily implementable solution in the context of the current fossil fuel crisis.^[120] In the UK, energy provider Octopus Energy has introduced a new scheme called a Power Pack Bundle,^[121] which includes leasing electric vehicles. In January 2026, Germany introduced a targeted EV incentive programme aimed at lower and middle-income households.^[122]

5.3.2. Second-hand market

Ireland's private car market is predominantly second-hand, as most households purchase used rather than new vehicles, particularly lower income households that may be excluded from the new car market.

The used EV market is a combination of imported vehicles, private car owner reselling, company car fleet transition, the rental car market and personal contract purchase agreements ending. Ireland has a well-established practice of importing second-hand cars, particularly from the UK and other

f France and Belgium.



countries with right-hand drive. As a result, the pace of fleet decarbonisation will depend on availability and affordability in the second-hand car market. The second-hand EV market is relatively immature. However, initial hesitancy to buy used EV cars seems to be easing with increased supply and demand.^[123] In 2025, research found that used EV prices fell by just 2.8%, compared with the 13% decline recorded in 2024, suggesting a stabilisation of depreciation in the EV second-hand market.^[124]

According to the CSO,^[8] the total number of used cars imported in 2025 was 71,604, compared with 61,838 in 2024. There was a significant increase in the volume of imported second-hand BEVs – 3,711 in 2025 compared with 1,714 in 2024 (a 116% increase) – and second-hand hybrid EVs, at 20,176 in 2025 compared with 15,365 in 2024 (a 31% increase). According to trade estimates, 15,425 used BEVs were sold in 2025, up from 11,754 in 2024.^[125]

The structure of the UK market is similar to the Irish market and provides a large proportion of the vehicles imported into the Irish market. A large-scale study of EV transition in the UK highlighted the role of the second-hand market and made a number of policy recommendations to address barriers to uptake of used EVs.^[126] The Council urges the Department of Transport to consider these recommendations in an Irish context with a view to accelerating EV adoption.

5.3.3. Electric vehicle charging infrastructure

Access to affordable, reliable and convenient EV charging infrastructure is a critical enabler of EV uptake. The expectation for the vast majority of households is that they will charge at home, taking advantage of favourable electricity rates. For example, SEAI assumes a blended rate of charging, with 90% at-home charging on a night rate and 10% public fast and high-powered charging, for their fuel price comparison.^[127] This is supported by incentives such as EV home charging grants and attractive electricity plans from suppliers. However, currently, home charging is not viable for householders without access to off-street parking. At present, it is prohibited to run a wire across a pavement or overhead to charge an EV. Those without off-street parking may face higher charging costs at public charging points.

The Private Wires Bill provides legalisation for on-street EV charging solutions. Cabinet approved commencement of drafting of the legislation in December 2025. Under the General Scheme of the Bill, it is proposed that local authorities will administer the authorisation of any works required to install on-street EV charging. The Zero Emission Vehicles Ireland (ZEVl) Regional and Local EV Charging Plan listed the solutions that could be implemented for those without off-street parking following enactment of the Bill. These include gully charging, overhead EV charging arms, kerbside bollard charging and kerbside lamp post charging.

The Council recommends that, following the enactment of the Private Wires Bill, the provisions relevant to on-street EV charging should be implemented within 12 months. Guidance and funding for local authorities and other relevant bodies to facilitate the roll-out of private wires for EV charging will be necessary in order to ensure alignment with regional EV charging strategies.⁹ The UK Government published similar guidance for local authorities to ensure the safe and effective use of cross-pavement solutions.^[128]

In conjunction with household charging, there is a need for the public charging network to expand rapidly to keep pace with the growing demand from EVs, including both passenger vehicles and light duty vehicles. The EU's AFIR mandates Member States to facilitate the deployment of

g There are EV strategies for the Dublin region (Dublin City Council, South Dublin City Council, Dún Laoghaire–Rathdown, Fingal), Cork and Limerick.



publicly accessible recharging stations for light duty vehicles, including passenger EVs, commensurate with the adoption rates of EVs within the Member State. The Draft National Policy Framework for Alternative Fuels Infrastructure estimated that a total of 214 MW and 712 MW of power output is likely to be required by 2025 and 2030, respectively, to support Climate Action Plan targets and be in line with the AFIR.^[129]

At the end of 2025, Ireland had 181 MW of power output, an increase of 31% on capacity in 2024.^[130,43] This has kept pace with the demand of the growing fleet of BEVs and PHEVs in 2025. In 2025, the number of publicly accessible alternating current recharging points per capita was the same as 2024, with 5.4 chargers per 10,000 people. The EU average is 19.3 per 10,000 people. However, the number of publicly accessible direct current recharging points increased from 2.2 chargers per 10,000 people in 2024 to 2.4 in 2025. The EU average is 4.7 chargers per 10,000 people. This is indicative of the roll-out of more advanced charging technologies.^[12] The Council welcomes the announcement in October 2025 of 90 additional EV recharging hubs with an estimated total power output of approximately 48 MW under the EV Recharging Infrastructure Light Duty Vehicle National Road Grant Scheme Phase 3.^[131]

In addition to increasing the power output and number of publicly accessible charging points, analysis highlights that poor perceptions of public charging reliability decrease EV purchase intentions.^[132] ZEVl has developed a draft data strategy^[133] in line with the provisions of Article 20 of AFIR, which, when implemented, should provide improved visibility on the number, location and status of EV charging points across the Irish network via a shared and open data system. The system will collect the near-real-time data provided by charge point operators (CPOs) regarding the status of charging points. The obligation is on CPOs to make these data available at no cost.

The Council recommends that, in order to advance proposed market-driven publicly accessible mapping platforms, the Department of Transport set robust industry standards for operation and reliability, including disclosure of uptime and outages. Similar data requirements have already been proposed within the draft ZEVl EV charging strategy 2026–2028 for heavy duty vehicle (HDV) public charging infrastructure providers, which are awarded a grant. For example, an HDV CPO will be required to maintain a $\geq 98\%$ charger uptime and $\geq 95\%$ successful charging sessions. Similar data and uptime obligations could be mandated for operators of public EV charging infrastructure.

5.4. Decarbonisation of commercial fleets

Over 23,700 new zero-emission HDVs^h were registered in Europe in 2025 and zero-emission trucks had a market share of 4.5%.^[134] However, decarbonisation of commercial fleets in Ireland has been limited. The uptake of zero-emission HGVs in Ireland is lagging behind targets,^[10] with 165 electric HGVs compared with a target of 700 by 2025 in the Climate Action Plan. For reference, the total fleet of HGVs in 2025 was 52,142.^[10] In contrast, Denmark introduced attractive incentives and clear policy signals to decarbonise the heavy goods fleet, resulting in a sharp increase in electric HGV sales, achieving a 15.7% share of total sales in Q4 2025.^[135]

Reports from the OECD^[136] in 2025 and the Freight Transport Association^[137] in 2024 both highlight the very significant contribution that electrification can make to the decarbonisation of the road freight sector. They find the total cost of ownership assessment of electric HDVs favourable to conventional vehicles, particularly with respect to buses, drayageⁱ and urban logistics. They also identify barriers to adoption that need to be addressed in order to realise the full potential benefits of electrification.

h HDVs include both heavy goods vehicles and large vehicles such as buses.

i Drayage is short-distance container freight transport, typically taking 2–8 hours.



The 2026 report from the HDV Electrification Pathway Working Group, established by the Department of Transport, lists key issues that need to be addressed for successful electrification within the HDV sector in Ireland. These include:

- ▶ high upfront cost of battery electric trucks,
- ▶ infrastructure gaps in public charging and depot upgrade,
- ▶ vehicle availability,
- ▶ knowledge gaps, including operator awareness and workforce readiness,
- ▶ regulatory and planning issues,
- ▶ access to incentives and grants (particularly for small and medium-sized operators).

In response to this report, the Zero-Emission Heavy Duty Vehicle (ZEHDV) Purchase Grant Scheme^[138] was revised with the aim of making it easier and more flexible for companies to invest in electric trucks and buses, with increased funding available. The updated scheme allows businesses to phase investment over time, helping them manage cash flow while modernising their fleets. Additional funding to install depot charging infrastructure and support charging logistics hubs was also made available under the ZEHDV Infrastructure Grant Scheme (ZEHDV-I).

A new EV Fleet Assessment Grant, provided through SEAI, offers fully funded support at the planning stage to help companies understand how EVs can operate within their existing fleets.^[139] The assessment covers routes, vehicle suitability, charging needs and total cost of ownership, providing a clear roadmap to electrification.

The Council recommends the continual review of the revised grant scheme for the uptake of zero-emission vehicles into the HDV fleet. This is to ensure that the revisions have been effective, particularly with respect to small and medium-scale HDV operators.

5.4.1. School transport decarbonisation

The planned continued expansion of the School Transport Scheme presents a significant opportunity to reduce transport emissions by shifting students away from car journeys to school and onto buses, and to decarbonise the school transport fleet. Current procedures and requirements do not provide an incentive for this transition towards low-carbon vehicles in the school fleet.

The School Transport Scheme provided services to an estimated 172,500 students across 10,300 routes in 2024/25. In 2025/26, the number of students on the scheme is estimated to increase by 4.8% to 180,800.^[17] The Department of Education's School Transport Review conducted in 2024 proposed that the scheme expand to carry an additional 100,000 pupils by 2030.

Approximately 94% of services in the scheme administered by Bus Éireann are delivered by private contractors. The fleet consists of taxis and minibuses, as well as conventional coaches and buses.^[140] The vehicles must be under 20 years old but are not required to meet low- or zero-emission standards beyond those mandated under current air quality regulations. In 2025, the Parliamentary Budget Office highlighted the absence of a clear requirement or financial inducement for operators under the School Transport Scheme.^[17] The 2025 Climate Action Plan committed to identifying measures to improve the sustainability of the School Transport Scheme; however, there has been no progress on this action.

The Council recommends that the Department of Education and Bus Éireann, supported by the Department of Transport and ZEV, actively promote the transition to a zero-emission school



transport fleet. School bus operators, whether they are a sole trader, company or statutory corporation, can apply to ZEV's ZEHDV Purchase Grant Scheme.^[141] Additionally, contracted taxi operators can apply to the Electric Small Public Service Vehicle Grant Scheme, administered by the NTA. However, this grant scheme^[141] is administered on a first-come-first-served basis and is often oversubscribed.^[142] The Council urges the NTA and ZEV to target and prioritise applicants delivering school transport services.

Additional charging infrastructure in support of an expanded electric school transport fleet may be necessary. The provision of EV charging infrastructure is provided for under the Climate Action Summer Works Scheme for schools.^[143]

5.4.2. Biofuels

The Renewable Transport Fuel Policy 2025–2027,^[144] published in June 2025, sets out the pathway to increase the supply of renewable transport fuels through annual increases in the statutory renewable transport fuel obligation on fuel suppliers.

Under the Climate Action Plan, the 2025 targets for fuel blending were 10% ethanol blended into petrol and 12% blending of biodiesel/hydrotreated vegetable oil (HVO) into diesel (E10:B12). This was projected to deliver a total emissions abatement of 0.53 Mt CO₂ eq. In 2024, the 16.8% increase in use of biofuels was the largest contributor to emissions reduction in the Transport sector.^[2]

In 2024, the Renewable Transport Fuel Obligation delivered a 9% ethanol blend in petrol and a 10% biodiesel/HVO blend in diesel, on track to meet the Climate Action Plan 2025 interim targets of E10 and B12.^[144] The Climate Action Plan sets a target for biodiesel blending of 20% by 2030 and ethanol blending in petrol of 10%, i.e. there is no additional target for ethanol blending once the 2025 target is reached.

Following investigations, credible concerns have been raised regarding the environmental integrity and long-term sustainability of HVO supplies.^[145] It is imperative that Ireland sources HVO products sustainably. In the CCAC's 2025 Transport Annual Review, the Council recommended that the sustainability of imported biofuels must be enforced, along with transparent, regular reporting of results by the National Oil Reserves Agency and the Department of Transport.

The Council reiterates its recommendation that the Department of Transport identify an appropriate mechanism to prioritise scarce supplies of sustainable biofuels for large HDVs as an interim measure ahead of full sector decarbonisation.^[146] Consultancy firm Ricardo has been commissioned by the Government to provide an assessment of the appropriate hierarchy of use of HVO across Transport and other economic sectors in response to a recommendation in the CCAC's 2025 Transport Annual Review. The Council anticipates the publication of this assessment and looks forward to considering its findings and key recommendations.^[147]

5.5. Active travel and micromobility

Active travel (walking or cycling for transport) is considered to be the most sustainable form of personal transport. Paris provides an exemplary case study in successful rapid implementation of measures to reduce car use and major investment in public and active travel, especially cycling. For example, its €108 million bike plan aims to make the city fully cyclable by 2026 and focuses on scaling up cycling infrastructure and embedding long-term behaviour change.^[148] The plan focuses on rapidly expanding the core cycling network and kick-starting a shift towards everyday cycling with the creation of new protected bike lanes, improving safety and continuity across key routes, and integrating cycling more closely with public transport. Early results are significant, with cycling volumes rising sharply, including an increase of up to 47% between 2019 and 2020.^[149]



Active travel and micromobility are also pivotal to Ireland's transport decarbonisation, offering a direct means to reduce car reliance while also alleviating urban congestion. The NTA 2025 Walking and Cycling Index^[19] found that active travel delivers €2.99 billion in annual economic benefit and removes up to 660,000 car trips from the roads each day across the five metropolitan areas (Dublin, Cork, Galway, Limerick, Waterford). This is most notable in Dublin, where the active modes are particularly concentrated, removing up to 510,000 cars from the road daily, avoiding 97 kt CO₂ eq of emissions annually, and generating €2.19 billion in economic benefit each year.^[150]

The Council welcomes the sustained active travel funding in Budget 2026, including in the NDP Transport Sectoral Plan commitment to provide €363 million per annum to the 31 local authorities for active travel and greenways in the period to 2030.^[151] This maintains the scale of investment drawn down in 2024 (€358.6 million^[152]) and 2025 (€358.9 million^[153]).^[154] By 2024, Government funding supported 800 active travel projects, with 600 km of walking, cycling and wheeling infrastructure delivered since 2020.^[155] By 2025, this had increased to approximately 1,000 km delivered.^[20] The 2026 allocation will progress around 1,000 projects and is expected to deliver 200 km of walking and cycling infrastructure.^[22]

Investment on this scale is essential to meet the National Sustainable Mobility Policy target of a 50% increase in daily active travel journeys by 2030. The active travel mode share was 20% in 2024, compared with the 28% share required by 2030, highlighting the need for accelerated delivery of active travel infrastructure and stronger public uptake.^[156] In response to parliamentary questions, the Minister for Transport has indicated that the number of projects now being progressed exceeds the level of funding available to the NTA, requiring the NTA to prioritise certain projects. As a result, some projects may be deferred to future years rather than progressing as planned.^[157]

The Council remains concerned that poor or unsafe cycling infrastructure continues to be a major barrier to modal shifts. This concern is supported by national safety data. The Road Safety Authority's Cyclist Spotlight Report (2020–2024) highlights that 45 cyclists were killed and 1,278 seriously injured over the 5-year period, with 80% of serious injuries occurring on urban roads and the majority involving collisions with motor vehicles.^[158] Furthermore, a survey of 2,191 people by Cycling Ireland found that 65.3% of respondents rated cycling infrastructure as poor, very poor or non-existent, 75.2% avoided certain roads due to safety concerns and 55.5% feel roads have become more dangerous year-on-year. This survey highlights that improving Ireland's cycling infrastructure is essential to increase active travel and improve perceptions of safety.^[159]

The CSO's Sustainable Mobility and Transport 2021 survey also found infrastructure to be a barrier to cycling uptake. Respondents who cycled less frequently than once per week identified a lack of suitable infrastructure, such as insufficient or unsafe cycling routes, as a key limiting factor, with nearly one in five citing this as a reason for not cycling more often.^[160]

Investment in dedicated infrastructure for walking and cycling to promote active travel is a key Government commitment,^[85] yet progress has been limited. The Council recommends that the Department of Transport develop new initiatives to promote and incentivise cycling as part of Budget 2027. This should include sufficient funding to the NTA and local authorities to progress existing active travel schemes, along with the completion of the Programme for Government 2025 commitment to conduct a review of the Bike to Work scheme to boost uptake among all workers and establish similar support schemes for bicycle ownership among non-workers and students, e.g. a Bike to College scheme or a targeted voucher scheme.^[161] In the NTA's Walking and Cycling Index 2025, 13% of all cycling trips within the Dublin Metropolitan Area were related to education (6% adults, 7% children), representing approximately 11 million education-related cycling trips per year.



Box 1. E-cargo bikes

Electrically assisted bicycles (e-bikes), including e-cargo bikes, are an increasingly visible part of Ireland's active travel. E-cargo bikes are specifically designed to transport children, shopping or other loads, making them functionally comparable to a private car for many everyday or care-related journeys. SEAI research found that 15% of car trips in Ireland are made to transport children to school or activities, with over half of these trips being 5 km or less.^[162]

An SEAI survey of 203 private e-cargo bike owners based on the island of Ireland showed that 15% of respondents reported selling a car/van since purchasing their e-cargo bike, and 90% reported less car use. A total of 71% of respondents used the e-cargo bikes for child-related trips at least 3–4 times a week, with 45% reporting the private car as having been the main mode used for these journeys prior to owning an e-cargo bike.^[163]

Moments of change (when life transitions, such as becoming a parent, moving home or retiring) are a potential opportunity for uptake of e-cargo bikes, when travel behaviours are most likely to shift. E-bikes/e-cargo bikes allow people to continue cycling through these moments that could otherwise lock households into long-term car dependence.^[162]

Ireland's climate action targets include a 20% reduction in total vehicle kilometres and a 50% increase in daily active travel by 2030.^[49] As outlined above, a large share of trips in Ireland are of a short distance and purpose-driven, suggesting that e-cargo bikes have the potential to make a meaningful contribution to mode shift at scale. Evidence from British Columbia's 2023–2024 e-bike rebate programme showed that e-bike ownership enabled net new mobility for both exercise and utilitarian purposes, reduced total weekly travel costs and increased travel-related physical activity. The same study showed that e-bikes produce zero emissions at point of use and have been shown to reduce post-purchase automobile use by 20% and CO₂ eq emissions by 17–22%.^[164]

While e-bike and e-cargo bike use is growing across Europe, overall uptake remains below its potential. European evidence shows strong growth in e-bike sales where financial incentives exist.^[165] In Ireland, private e-cargo bikes are supported through the Cycle to Work scheme, which offers up to €3,000 towards a new e-cargo bike. However, to fully realise the potential of e-cargo bikes, incentives should be accessible to a broader demographic, such as the self-employed, people out of formal employment and students.^[163]

E-cargo bikes also affect how cyclists experience road space. Research conducted by Egan *et al.* (2026) in Ireland found that e-cargo bike users felt more respected by motorists and more secure when e-cargo cycling. Furthermore, the e-cargo bike's size/width/height on the road can improve perceived safety and enable riders, particularly parents, to travel more confidently in mixed traffic conditions.^[166]

However, with the current cycling infrastructure, e-cargo bike users also highlighted some challenges, including the need for more secure and sometimes more complex locking/storage arrangements and greater care when positioning on the road, and concerns relating to parking and insurance.^[167] This highlights the importance of designing infrastructure to fit emerging forms of mobility.



5.6. Resilient transport network

5.6.1. Ports resilience

While the Council welcomes the establishment of a climate adaptation forum for ports in Ireland to facilitate knowledge and data sharing between ports, the full review of the 2013 National Ports Policy^[168] has not been published yet, despite the Climate Action Plan 2025 indicating a planned publication date of Q3 2025 for the revised policy.^[169] This delay is concerning given the growing threats posed by sea level rise and coastal flooding to port infrastructure. Given the critical role ports play in Ireland's economy, international connectivity and trade, and the expansion of offshore wind, enhancing their climate resilience is essential to mitigate risk, maintain continuity of operations and protect long-term economic stability.

Since 2024, the Council has consistently called for the urgent finalisation of the revised National Ports Policy by the Department of Transport, noting that this is of critical importance to ensure a harmonised approach across all ports to the integration of climate risks into planning, operations, infrastructure investment and decision-making. Each port should be required to adapt to extreme weather events and sea level rise.

All major Irish ports have adopted formal masterplans to guide their long-term strategic development and infrastructure investment. However, each port has a masterplan for a different time frame and treats risks to and planning for climate resilience differently. The Transport Sectoral Adaptation Plan II (T-SAP II) sets out that, by 2030, climate adaptation measures for existing port infrastructure will be incorporated into port masterplanning. These measures will be integrated into new masterplans as they are developed and included as an annex to existing masterplans as part of the interim review process. T-SAP II identified 22 priority impacts for ports and maritime transport, and the majority were associated with changing precipitation patterns and flooding.

5.6.2. Roads resilience

Many national, regional and local roads suffer from inadequate drainage systems, which makes them particularly vulnerable to flooding. Increasingly intense and sustained periods of rainfall are also leading to increased damage and disruption to Ireland's roads network.

The Department of Transport reported that over 300 roads were damaged and around 50 rendered impassable during Storm Chandra.^[170] Widespread transport disruption occurred in the Dublin area, with a 'major event' declared on the M50 due to flooding and several roads in south Dublin rendered impassable, causing knock-on impacts for Dublin Bus services.^[171,172] The estimated cost of repairing damage to local and regional roads caused by the storm is €58.9 million, based on data from eight of the most affected local authorities.^[54]

A rapid attribution study by the Weather Attribution Science Irish Operational User Service (WASITUS)^[173] found that the 7-day rainfall accumulation during Storm Chandra was 9% higher than it would have been in a -1.3°C pre-industrial climate. It further concluded that this level of rainfall accumulation over a 7-day period is now almost three times more likely to occur than in a pre-industrial climate, shifting from a 1 in 150-year event to a 1 in 60-year event. A separate study^[174] found that climate change has made heavy rainfall events that contributed to flooding during Storm Claudia both more intense and more likely. These results reinforce the urgent need for continued investment in flood resilience and drainage infrastructure. Prolonged and intense rainfall is placing significant strain on regional and local road networks by accelerating surface deterioration and undermining road foundations, thereby increasing maintenance, repair and strengthening requirements.



Current funding allocations from the Department of Transport are insufficient. In 2025, €713 million was invested nationally in regional and local roads, but only €16.5 million, or 2.3% of this total, was specifically designated for climate change adaptation, supporting 315 projects focused on flood alleviation, coastal protection and resilience measures.^[175] For 2026, the Department of Transport announced a total of €718 million for regional and local roads, as part of a wider €1.5 billion national roads package.^[52] Within this, €16.5 million was allocated to 294 projects under the Climate Change Adaptation and Resilience Programme.

The regional and local roads allocation is unchanged from 2025 and remains significantly below the €23 million invested in 2021^[53] despite the increasing impacts of extreme weather events and increasing winter rainfall, and rising material costs. In this context, the Council recommends that the Department of Transport, in collaboration with the Department of Public Expenditure, Infrastructure, Public Service Reform and Digitalisation, review the annual programme of regional and local road grant allocations with a view to identifying effective solutions for increasing investment and deployment of technologies and approaches to enhance the climate resilience of regional and local roads.

Allocations should be based on the pavement surface condition index undertaken by local authorities and should be sufficient to meet the demands of repairing these roads, with prioritisation of critical routes. Repair and maintenance measures should be based on efficient and effective technologies, pothole repair should seek to make use of alternative materials, and nature-based approaches to drainage should be applied as far as possible.

T-SAP II identifies significant exposure of road corridors to flooding, extreme rainfall and storm damage.^[30] The plan sets out actions to propose new funding schemes for climate proofing national, regional and local roads in Ireland, considering appropriate funding levels, specific implementation needs and asset types, and with due regard to the Government budgetary process. It also includes continued implementation of the existing climate adaptation strategy for roads and the streamlining of requests for financial resources for TII and local authorities in the aftermath of extreme weather events.

The Council welcomes the publication of the Climate Adaptation Implementation Plan for National Roads 2026–2030 by TII.^[56] The document sets out actions to improve drainage across the national road network, including a desktop vulnerability mapping exercise of road drainage assets and updates to key drainage guidance. The Council recommends that TII urgently advance the vulnerability mapping exercise, which was scheduled for 2025, and update drainage-related asset management guidance and design manuals so that they reflect National Climate Change Risk Assessment (NCCRA) findings and emerging evidence on the capacity of existing drainage design standards to withstand projected increases in future rainfall.

5.6.3. Rail resilience

Rail services were also heavily disrupted during Storm Chandra, with the Rosslare line and a number of stations in Dublin and the surrounding area closed due to flooding, including from severe wave overtopping.^[176]

The Department of Transport has formally committed to funding new rail infrastructure under the Rail Project Prioritisation Strategy,^[177] published on 15 December 2025. The strategy outlines how to best sequence and optimise the recommendations of the All-Island Strategic Rail Review.^[178] A Strategic Flood Risk Assessment^[179] was carried out as part of the review, which has established the framework for rail investment over the next 25 years. It is noted that a Site-specific Flood Risk Assessment (SSFRA) will be required at the planning stage for future development proposals,



including in any additional areas where new infrastructure is proposed as part of the review.

The Council recommends that Iarnród Éireann and the Department of Transport ensure that comprehensive and decision-grade climate risk assessments and climate proofing measures are undertaken for major projects prioritised under the Rail Project Prioritisation Strategy and for vulnerable sections of the rail network. These climate risk assessments should extend beyond flooding to provide a holistic assessment of climate hazards relevant to rail infrastructure, including cross-sectoral climate risks and interdependencies. Climate risk assessments should directly inform prioritisation, design and funding decisions, ensuring that rail projects exposed to significant unmanaged climate risks are redesigned or appropriately sequenced with adaptation measures. Early identification of low-regret adaptation interventions should be prioritised, recognising that embedding resilience measures at an early stage is more cost-effective and reduces the likelihood of future service disruption.



References

- 1 Sustainable Energy Authority of Ireland, 'National energy balance'. Accessed: May 18, 2026. [Online]. Available: <https://www.seai.ie/data-and-insights/seai-statistics/key-publications/national-energy-balance>
- 2 Environmental Protection Agency, 'Ireland's Final Greenhouse Gas Emissions 1990–2024', Mar. 2026. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.epa.ie/publications/monitoring-assessment/climate-change/air-emissions/irelands-final-greenhouse-gas-emissions-1990-2024.php>
- 3 Sustainable Energy Authority of Ireland, 'First Look: Mid-year Review of Ireland's Energy and Related Emissions in 2025 – Ireland's Energy and Energy-related Emissions from January to June 2025', Oct. 2025. Accessed: May 18, 2026. [Online]. Available: <https://www.seai.ie/sites/default/files/data-and-insights/seai-statistics/key-publications/energy-half-year-review/Half-Year-Review-of-Irelands-Energy-and-Related-Emissions.pdf#page=7&zoom=100,72,417>
- 4 Sustainable Energy Authority of Ireland, 'Renewable energy targets'. Accessed: May 29, 2026. [Online]. Available: <https://www.seai.ie/data-and-insights/seai-statistics/renewables>
- 5 Central Statistics Office, 'TTA03 – Mechanically propelled vehicles under licence'. Accessed: May 20, 2026. [Online]. Available: <https://data.cso.ie/table/TTA03>
- 6 Central Statistics Office, 'Transport hub – New electric vehicles licensed'. Accessed: May 18, 2026. [Online]. Available: <https://www.cso.ie/en/releasesandpublications/hubs/p-transo/transporthub/sustainabilityandtransport/newelectricvehicleslicensed/>
- 7 Central Statistics Office, 'TEA17 – New vehicles licensed for the first time'. Accessed: May 20, 2026. [Online]. Available: <https://data.cso.ie/table/TEA17>
- 8 Central Statistics Office, 'TEA27 – New and secondhand vehicles'. Accessed: May 18, 2026. [Online]. Available: <https://data.cso.ie/table/TEA27>
- 9 Central Statistics Office, 'TTM02 – Mechanically propelled vehicles under licence'. Accessed: May 20, 2026. [Online]. Available: <https://data.cso.ie/table/TTM02>
- 10 Department of Transport and Zero Emission Vehicles Ireland, 'HDV Electrification Pathway – Navigating the Path to Heavy Duty Electrification in Ireland', 2026. Accessed: May 20, 2026. [Online]. Available: <https://www.zevi.ie/sites/default/files/2026-03/HDV-Electrification-Pathway-Report-Jan2026.pdf>
- 11 Transport Infrastructure Ireland, 'Zero-emission heavy duty vehicle purchase grant scheme'. Accessed: May 18, 2026. [Online]. Available: <https://www.tii.ie/en/roads-tolling/alt-fuel-projects-unit/zero-emission-heavy-duty/>
- 12 European Alternative Fuels Observatory, 'Infrastructure'. Accessed: May 20, 2026. [Online]. Available: <https://alternative-fuels-observatory.ec.europa.eu/transport-mode/road/european-union-eu27/infrastructure>
- 13 National Transport Authority, 'Passenger journeys up 6% across the TFI network in 2025'. Accessed: May 20, 2026. [Online]. Available: <https://www.nationaltransport.ie/news/passenger-journeys-up-6-across-the-tfi-network-in-2025/>
- 14 Central Statistics Office, 'THA25 – Passenger journeys by public transport'. Accessed: May 20, 2026. [Online]. Available: <https://data.cso.ie/table/THA25>
- 15 European Alternative Fuels Observatory, 'Ireland – Vehicles and fleet'. Accessed: May 18, 2026. [Online]. Available: <https://alternative-fuels-observatory.ec.europa.eu/transport-mode/road/ireland/vehicles-and-fleet>



- 16 National Transport Authority, 'Bus Connects Dublin – Progress Report December 2025', Dec. 2025. Accessed: May 18, 2026. [Online]. Available: <https://busconnects.ie/wp-content/uploads/2025/12/BusConnects-Programme-Progress-Report-Dec-2025.pdf>
- 17 Parliamentary Budget Office, 'Overview of the School Transport Scheme'. Accessed: May 18, 2026. [Online]. Available: https://data.oireachtas.ie/ie/oireachtas/parliamentaryBudgetOffice/2025/2025-06-19_overview-of-the-school-transport-scheme_en.pdf
- 18 Houses of the Oireachtas, 'Active travel – Dáil Éireann debate'. Accessed: May 20, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2025-11-18/289/>
- 19 National Transport Authority, 'Walking and Cycling Index 2025', 2025. Accessed: May 18, 2026. [Online]. Available: <https://www.nationaltransport.ie/planning-and-investment/transport-investment/active-travel-investment-programme/walking-and-cycling-index-2025/>
- 20 Department of Transport, 'Minister O'Brien publishes third annual progress report on the National Sustainable Mobility Policy Action Plan 2022–2025'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/press-releases/minister-obrien-publishes-third-annual-progress-report-on-the-national-sustainable-mobility-policy-action-plan-2022-2025/>
- 21 Government of Ireland, 'Sustainable Mobility Policy – Year Three Progress Report', 2025. Accessed: Jun. 02, 2026. [Online]. Available: https://assets.gov.ie/static/documents/076637ab/Year_3_Progress_Report_-_FINAL_DRAFT_-_AMENDED_Clean.pdf
- 22 Department of Transport, 'Ministers announce €360 million in capital funding for Active Travel and Greenways in 2026'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/press-releases/ministers-announce-360-million-in-capital-funding-for-active-travel-and-greenways-in-2026/>
- 23 Department of Transport, 'National Development Plan Review 2025 – Securing Ireland's Future Sectoral Investment Plan: Transport', Nov. 2025. Accessed: May 20, 2026. [Online]. Available: https://assets.gov.ie/static/documents/df0ce05f/NDP_Review_2025_Sectoral_Investment_Plan_for_Transport.pdf
- 24 Environmental Protection Agency, 'Ireland's Greenhouse Gas Emissions Projections 2025–2030', May 2026. Accessed: May 29, 2026. [Online]. Available: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/irelands-greenhouse-gas-emissions-projections-2025-2030.php>
- 25 Sustainable Energy Authority of Ireland, 'Monthly oil statistics'. Accessed: May 21, 2026. [Online]. Available: <https://www.seai.ie/data-and-insights/seai-statistics/monthly-energy-data/oil-monthly>
- 26 Central Statistics Office, 'TII03 – Passenger journeys by Luas'. Accessed: May 20, 2026. [Online]. Available: <https://data.cso.ie/table/TII03>
- 27 Climate Change Advisory Council and Irish Fiscal Advisory Council, 'A Colossal Missed Opportunity: Ireland's Climate Action and the Potential Costs of Missing Targets', 2025. Accessed: Jun. 09, 2026. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/otherpublications/Ireland's%20climate%20action%20and%20the%20potential%20costs%20of%20missing%20targets%20FINAL.pdf>
- 28 Sustainable Energy Authority of Ireland, 'SEAI national energy projections 2025 report plots'. Accessed: Jun. 09, 2026. [Online]. Available: <https://seaiprod.prod.acquia-sites.com/sites/default/files/2025-12/National-Energy-Projections-2025-Report-Plots.html>
- 29 N. Dwyer, D. McCullagh and B. O'Keefe, 'Implementation of Climate Adaptation Indicators: Lessons Learned from the Transport Sector', 2024. Accessed: May 18, 2026. [Online]. Available: <https://www.epa.ie/publications/monitoring--assessment/climate-change/implementation-of-climate-adaptation-indicators-lessons-learned-from-the-transport-sector.php>



- 30 Department of Transport, 'Transport Sectoral Adaptation Plan (T-SAP II)', Nov. 2025. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/publications/transport-sectoral-adaptation-plan-t-sap-ii/>
- 31 Department of Transport, 'Moving Together – A Collaborative Approach to Systems Change in Transport 2026–2030', May 2026. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/publications/moving-together-a-collaborative-approach-to-systems-change-in-transport-20262030/>
- 32 Department of Transport, 'Department of Transport opens public consultation on new strategy to manage and reduce congestion'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/press-releases/department-of-transport-opens-public-consultation-on-new-strategy-to-manage-and-reduce-congestion/>
- 33 An Post, 'Low fixed-rate electric, EV & green car loans'. Accessed: May 20, 2026. [Online]. Available: <https://www.anpost.com/Money/Loans/Electric-Car-Loans>
- 34 Credit Union, 'Credit Union Green Loans for EVs, hybrid cars and home improvements'. Accessed: May 20, 2026. [Online]. Available: <https://www.clcu.ie/credit-union-green-loan/>
- 35 Parliamentary Budget Office, 'An Overview of Electric Vehicles and Their Impact on the Tax Base', 2021. Accessed: May 18, 2026. [Online]. Available: https://data.oireachtas.ie/ie/oireachtas/parliamentaryBudgetOffice/2021/2021-12-20_an-overview-of-electric-vehicles-and-their-impact-on-the-tax-base_en.pdf
- 36 E. Casey and K. Carroll, 'What Climate Change Means for Ireland's Public Finances', Oct. 2023. Accessed: May 18, 2026. [Online]. Available: <https://www.fiscalcouncil.ie/wp-content/uploads/2023/10/What-climate-change-means-for-Irelands-public-finances-Casey-and-Carroll-2023-Irish-Fiscal-Advisory-Council.pdf>
- 37 Houses of the Oireachtas, 'Traffic management – Dáil Éireann debate'. Accessed: May 18, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2026-01-15/258/>
- 38 Commission on Taxation and Welfare, 'Foundations for the Future', 2020. Accessed: May 18, 2026. [Online]. Available: <https://assets.gov.ie/static/documents/foundations-for-the-future-report-of-the-commission-on-taxation-and-welfare.pdf>
- 39 Department of the Taoiseach, 'Government announces new cost-of-living measures for families, businesses and the most vulnerable'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-the-taoiseach/press-releases/government-announces-new-cost-of-living-measures-for-families-businesses-and-the-most-vulnerable/>
- 40 Department of Education and Youth, 'Ministers Foley, Madigan and Byrne announce details of over €10.5 billion education funding in Budget 2024'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-education/press-releases/ministers-foley-madigan-and-byrne-announce-details-of-over-105-billion-education-funding-in-budget-2024/>
- 41 Department of Education and Youth, 'Ministers Foley, Naughton and Byrne announce details of almost €12 billion education funding in Budget 2025'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-education/press-releases/ministers-foley-naughton-and-byrne-announce-details-of-almost-12-billion-education-funding-in-budget-2025/>
- 42 Department of Education and Youth, 'School transport'. Accessed: May 20, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-education/services/school-transport/>
- 43 Climate Change Advisory Council, 'Annual Review 2025 – Transport', Jun. 2025. Accessed: May 18, 2026. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/annualreviewandreport/CCAC-AR2025-Transport-final.pdf>



- 44 Department of Education and Youth, 'Minister Foley announces the publication of "School Transport 2030" – The review of the School Transport Scheme'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-education/press-releases/minister-foley-announces-the-publication-of-school-transport-2030-the-review-of-the-school-transport-scheme/>
- 45 Department of Transport, 'Budget 2026: Significant investment supporting the resilience of our transport network'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/press-releases/budget-2026-significant-investment-supporting-the-resilience-of-our-transport-network/>
- 46 Department of Transport, 'Ministers welcome launch of free travel for under 9s'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/press-releases/ministers-welcome-launch-of-free-travel-for-under-9s/>
- 47 Department of Social Protection, 'Ministers Calleary and O'Brien announce extension of Free Travel Scheme for over 70s'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-social-protection/press-releases/ministers-calleary-and-obrien-announce-extension-of-free-travel-scheme-for-over-70s/>
- 48 Transport Infrastructure Ireland, 'Luas Cork public consultation'. Accessed: May 18, 2026. [Online]. Available: <https://consult.tii.ie/luas-cork-nspc2>
- 49 Department of Transport, 'National Sustainable Mobility Policy', Apr. 2022. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/publications/national-sustainable-mobility-policy/>
- 50 Houses of the Oireachtas, 'Ports policy – Dáil Éireann debate'. Accessed: May 18, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2026-03-04/62/>
- 51 Dublin Port, 'Dublin Port commences €2.5 million investment to protect critical Great South Wall'. Accessed: May 18, 2026. [Online]. Available: <https://www.dublinport.ie/dublin-port-commences-e2-5million-investment-to-protect-critical-great-south-wall/>
- 52 Department of Transport, 'Ministers for Transport announce over €1.5 billion for national, regional and local roads'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/press-releases/ministers-for-transport-announce-over-1-5-billion-for-national-regional-and-local-roads/>
- 53 Department of Transport, 'Ministers announce regional and local roads allocations for 2021'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/press-releases/ministers-announce-regional-and-local-roads-allocations-for-2021/>
- 54 RTÉ, '€59m in damage to roads after Storm Chandra, say councils'. Accessed: May 18, 2026. [Online]. Available: <https://www.rte.ie/news/2026/0304/1561081-roads-storm-chandra/>
- 55 RTÉ, 'Price of the pothole – How oil spike affects road repairs'. Accessed: May 18, 2026. [Online]. Available: <https://www.rte.ie/news/2026/0426/1570099-potholes-repair-cost/>
- 56 Transport Infrastructure Ireland, 'Climate Adaptation – National Roads Network Implementation Plan 2026–2030', Jan. 2026. Accessed: May 18, 2026. [Online]. Available: <https://www.tii.ie/media/cqxn3vnw/climate-adaptation-implementation-plan-for-national-roads-2026-2030.pdf>
- 57 Iarnród Éireann, 'Second round of public consultation on major climate resilience programme for eastern coast rail line to begin'. Accessed: May 18, 2026. [Online]. Available: <https://www.irishrail.ie/en-ie/news/ecripp-pc2>
- 58 Zero Emission Vehicles Ireland, 'Minister O'Brien launches public consultation on draft national EV charging infrastructure strategy 2026–2028'. Accessed: May 18, 2026. [Online]. Available: <https://www.zevi.ie/news/minister-obrien-launches-public-consultation-on-draft-national-ev-charging-infrastructure>



- 59 Zero Emission Vehicles Ireland, 'Draft National EV Charging Infrastructure Strategy 2026–2028', 2026. Accessed: May 18, 2026. [Online]. Available: <https://www.zevi.ie/sites/default/files/2026-02/EV-Infrastructure-Strategy-2026-2028-Final-Web.pdf>
- 60 European Commission, 'Commission proposes actions to protect Europeans from the fossil energy crisis'. Accessed: May 20, 2026. [Online]. Available: https://ec.europa.eu/commission/presscorner/detail/en/ip_26_629
- 61 European Commission, 'Commission adopts temporary state aid framework to support sectors affected by Middle East crisis'. Accessed: May 20, 2026. [Online]. Available: https://ec.europa.eu/commission/presscorner/detail/en/ip_26_894
- 62 European Commission, 'AccelerateEU Catalogue'. Accessed: May 20, 2026. [Online]. Available: https://energy.ec.europa.eu/strategy/accelerateeu-strengthen-eu-energy-resilience/accelerateeu-catalogue_en
- 63 Central Statistics Office, 'CPM12 – National average price'. Accessed: May 20, 2026. [Online]. Available: <https://data.cso.ie/table/cpm12>
- 64 Economic and Social Research Institute, 'ESRI researchers address the Oireachtas Committee on Budgetary Oversight'. Accessed: May 20, 2026. [Online]. Available: <https://www.esri.ie/news/esri-researchers-address-the-oireachtas-committee-on-budgetary-oversight-14>
- 65 Revenue, 'Excise duty rates – Mineral oil tax'. Accessed: May 21, 2026. [Online]. Available: <https://www.revenue.ie/en/companies-and-charities/excise-and-licences/excise-duty-rates/mineral-oil-tax.aspx>
- 66 M. Barrett, N. Farrell and B. Roantree, 'Energy Poverty and Deprivation in Ireland', Jun. 2022. <https://doi.org/10.26504/rs144>
- 67 J. A. Estévez Montes and M. Tovar Reaños, 'Energy Poverty and Affordability in Ireland', ESRI, Dublin, Apr. 2026. <https://doi.org/10.26504/SUSTAT139>
- 68 International Energy Agency, '2026 energy crisis policy response tracker'. Accessed: May 20, 2026. [Online]. Available: <https://www.iea.org/data-and-statistics/data-tools/2026-energy-crisis-policy-response-tracker>
- 69 International Energy Agency, 'Sheltering from oil shocks – Road transport fuels'. Accessed: May 20, 2026. [Online]. Available: <https://www.iea.org/reports/sheltering-from-oil-shocks/road-transport-fuels>
- 70 A. Stefaniec, W. Brazil, W. Whitney, W. Zhang, B. Colleary and B. Caulfield, 'Examining the long-term reduction in commuting emissions from working from home', *Transport Research Part D: Transport and Environment*, vol. 127, 104063, Feb. 2024, <https://doi.org/10.1016/J.TRD.2024.104063>
- 71 International Energy Agency, 'New IEA report highlights options to ease oil price pressures on consumers in response to Middle East supply disruptions'. Accessed: May 20, 2026. [Online]. Available: <https://www.iea.org/news/new-iea-report-highlights-options-to-ease-oil-price-pressures-on-consumers-in-response-to-middle-east-supply-disruptions>
- 72 D. Cassidy and K. De Bruin, 'Evaluating transport decarbonisation policies under carbon budget constraints: The role of carbon pricing and ICE bans', Dec. 2025. Accessed: May 20, 2026. [Online]. Available: <https://www.esri.ie/system/files/publications/WP815.pdf>
- 73 Department of Transport, 'Transport and climate change'. Accessed: May 20, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/policy-information/transport-and-climate-change/>
- 74 M. Donnelly, 'Opening statement by Climate Change Advisory Council chairperson to the Budget Oversight Committee'. Accessed: May 18, 2026. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/councilcorrespondenceandadvice/Climate%20Change%20Advisory%20Council%20Opening%20Statement%20BOC17.02.2026%20.pdf>



- 75 Department of Finance, 'Energy, Environmental and Vehicle Tax – Tax Strategy Group 25/10', Jul. 2025. Accessed: May 18, 2026. [Online]. Available: https://assets.gov.ie/static/documents/TSG_25-10_Energy_Environmental_and_Vehicle_Tax_UPD.pdf
- 76 EUR-Lex, 'Directive (EU) 2023/959 of the European Parliament and of the Council amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the European Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system'. Accessed: May 18, 2026. [Online]. Available: <https://eur-lex.europa.eu/eli/dir/2023/959/oj/eng>
- 77 D. O'Mahony *et al.*, 'Climate Change in the Irish Mind –Wave 2: Report 1', 2023. Accessed: May 20, 2026. [Online]. Available: <https://www.epa.ie/publications/monitoring-assessment/climate-change/Climate-Change-in-the-Irish-Mind-Wave-2-Report-1.pdf>
- 78 TomTom, 'Traffic overview: Dublin, Ireland'. Accessed: May 18, 2026. [Online]. Available: <https://www.tomtom.com/traffic-index/city/dublin>
- 79 Department of Transport, 'The Economic Cost of Congestion in the Greater Dublin Area 2022–2040', 2023. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/publications/the-economic-cost-of-congestion-in-the-greater-dublin-area-2022-2040/>
- 80 Department of Transport, 'The Economic Cost of Congestion in the Regional Cities 2022–2040', 2025. Accessed: May 18, 2026. [Online]. Available: https://assets.gov.ie/static/documents/Cost_of_Congestion_Regional_Cities_FINAL.pdf
- 81 Eurostat, 'General government expenditure by function (COFOG)'. Accessed: May 20, 2026. [Online]. Available: https://ec.europa.eu/eurostat/databrowser/view/GOV_10A_EXP_custom_21542374/default/table
- 82 Eurostat, 'Population change – Demographic balance and crude rates at national level'. Accessed: May 20, 2026. [Online]. Available: https://ec.europa.eu/eurostat/databrowser/view/demo_gind/default/bar?lang=en
- 83 N. Conroy and K. Timoney, 'Ireland's infrastructure demands', Oct. 2024. Accessed: May 20, 2026. [Online]. Available: <https://www.fiscalcouncil.ie/wp-content/uploads/2024/10/Irelands-Infrastructure-Demands.pdf>
- 84 National Transport Authority, 'NTA Statement of Strategy 2026–2030', 2026. Accessed: May 18, 2026. [Online]. Available: <https://www.nationaltransport.ie/publications/nta-statement-of-strategy-2026-2030/>
- 85 Government of Ireland, 'Programme for Government 2025 – Securing Ireland's Future', 2024. Accessed: May 20, 2026. [Online]. Available: <https://assets.gov.ie/static/documents/programme-for-government-securing-irelands-future.pdf>
- 86 Houses of the Oireachtas, 'Public transport – Dáil Éireann debate'. Accessed: May 20, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2026-01-20/304/>
- 87 H. M. Sistig, P. Sinhuber, M. Rogge and D. U. Sauer, 'Evaluating costs and operations of public bus fleet electrification', *Sustainable Mobility and Transport*, vol. 2, no. 1, 15, Apr. 2025, <https://doi.org/10.1038/s44333-025-00030-y>
- 88 Houses of the Oireachtas, 'Dublin Bus – Dáil Éireann debate'. Accessed: May 20, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2026-02-26/109/>
- 89 GVB Holding N.V., 'CO₂-Verslag 2025', Nov. 2025. Accessed: May 18, 2026. [Online]. Available: https://over.gvb.nl/content/uploads/2025/11/GVB_CO2-verslag-2025_V1.1.pdf
- 90 BVG, 'Elektromobilität bei der BVG'. Accessed: May 18, 2026. [Online]. Available: <https://www.bvg.de/de/unternehmen/nachhaltige-mobilitaet/flotte/e-mobilitaet>



- 91 Epinion, 'Kortlægning og Evaluering af Nulemissionsudbud', Sep. 2019. Accessed: May 18, 2026. [Online]. Available: https://www.moviatrafik.dk/media/i1dmfouv/rapport_kortlaegning-og-evaulering-af-nulemission_sept19-aod.pdf
- 92 Transport for London, 'Bus Action Plan – Building an Attractive, Zero-emission Bus Service for all Londoners'. Accessed: May 18, 2026. [Online]. Available: <https://content.tfl.gov.uk/bus-action-plan.pdf>
- 93 VRT, 'Le millième bus électrique enfin livré à la RATP'. Accessed: May 21, 2026. [Online]. Available: <https://www.ville-rail-transport.com/transport-urbains/le-millieme-bus-electrique-enfin-livre-a-la-ratp/>
- 94 Transport for Ireland, 'Minister Ryan launches two all-electric buses in Dingle Daingean Ui Chuis area'. Accessed: May 20, 2026. [Online]. Available: <https://www.localinkkerry.ie/2024/06/evlaunch2024/>
- 95 Transport for Ireland, 'The pros and cons of electric buses: TFI Local Link Galway's journey into the future'. Accessed: May 20, 2026. [Online]. Available: <https://www.localinkgalway.ie/post/the-pros-and-cons-of-electric-buses-tfi-local-link-galway-s-journey-into-the-future>
- 96 Irish Examiner, "It's been transformational": Rural communities connected by new electric bus routes'. Accessed: May 20, 2026. [Online]. Available: <https://www.irishexaminer.com/sponsored/arid-41293396.html>
- 97 Transport for Ireland, 'TFI Local Link celebrates one year of sustainable and accessible travel with 454 electric bus service'. Accessed: May 21, 2026. [Online]. Available: <https://localinkmayo.ie/tfi-local-link-celebrates-one-year-of-sustainable-and-accessible-travel-with-454-electric-bus-service/>
- 98 National Transport Authority, 'Re: Information submission following committee meeting on 15 January 2026'. Accessed: May 21, 2026. [Online]. Available: https://data.oireachtas.ie/ie/oireachtas/committee/dail/34/committee_of_public_accounts/submissions/2026/2026-03-20_correspondence-ms-anne-shaw-chief-executive-officer-national-transport-authority-r-2026-0141-pac_en.pdf
- 99 Climate Change Advisory Council, 'Annual Review 2026 – Electricity', May 2026. Accessed: May 21, 2026. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/annualreviewandreport/CCAC-AR2026-2-electricity-final.pdf>
- 100 Climate Change Advisory Council, 'Re: Critical Infrastructure Bill'. Accessed: Jun. 09, 2026. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/councilcorrespondenceandadvice/Critical%20Infrastructure%20Bill%20Letter.pdf>
- 101 National Transport Authority, 'Park and Ride Investment Programme'. Accessed: May 21, 2026. [Online]. Available: <https://www.nationaltransport.ie/planning-and-investment/transport-investment/park-and-ride-investment-programme/>
- 102 Government of Ireland, 'National Planning Framework – First Revision', Apr. 2025. Accessed: May 21, 2026. [Online]. Available: <https://cdn.npf.ie/wp-content/uploads/National-Planning-Framework-First-Revision-April-2025-1.pdf>
- 103 Climate Change Advisory Council, 'Letter on transport policy and congestion'. Accessed: May 21, 2026. [Online]. Available: <https://www.climatecouncil.ie/councilpublications/councilcorrespondenceandadvice/20.2.26%20Letter%20on%20Transport%20Policy%20and%20Congestion.pdf>
- 104 C. McGookin, A. Menon, S. McDonagh, B. Ó Gallachóir and P. Deane, 'Ireland's Climate Change Assessment Volume 2 – Summary for Policymakers', 2024. Accessed: May 18, 2026. [Online]. Available: <https://www.epa.ie/publications/monitoring-assessment/climate-change/irelands-climate-change-assessment-volume-2.php>
- 105 BEUC, 'BEUC study shows electric cars are a good deal for consumers'. Accessed: May 18, 2026. [Online]. Available: <https://www.beuc.eu/press-release/beuc-study-shows-electric-cars-are-good-deal-consumers>



- 106 Zero Emission Vehicles Ireland and Department of Transport, 'Electric Vehicle Charging Infrastructure Strategy 2022–2025', 2020. Accessed: May 18, 2026. [Online]. Available: <https://www.zevi.ie/sites/default/files/2024-10/EV-Infrastructure-Strategy-2022-2025.pdf>
- 107 Sustainable Energy Authority of Ireland, 'Cost savings – Electric vehicles'. Accessed: May 18, 2026. [Online]. Available: <https://www.seai.ie/plan-your-energy-journey/for-your-home/electric-vehicles/about-evs/why-drive-electric/cost-savings>
- 108 A. Mandev, P. Plotz and F. Sprei, 'Factors impacting real-world fuel economy of plug-in hybrid electric vehicles in Europe – An empirical analysis', *Environmental Research Communications*, vol. 6, 051001, 2024, Accessed: May 20, 2026. [Online]. Available: <https://publica-rest.fraunhofer.de/server/api/core/bitstreams/8ef43b80-eac4-4d40-b561-afd98010a4a8/content>
- 109 EUR-Lex, 'Regulation (EU) 2019/631 of the European Parliament and of the Council setting CO₂ emission performance standards for new passenger cars and for new light commercial vehicles'. Accessed: May 21, 2026. [Online]. Available: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02019R0631-20231203>
- 110 European Commission, 'Climate action – Cars and vans'. Accessed: May 20, 2026. [Online]. Available: https://climate.ec.europa.eu/eu-action/transport-decarbonisation/road-transport/cars-and-vans_en
- 111 Central Statistics Office, 'TEM12 – New vehicles licensed for the first time'. Accessed: May 20, 2026. [Online]. Available: <https://data.cso.ie/table/TEM12>
- 112 National Transport Authority, 'National Household Travel Survey – Research Report 2024', Mar. 2026. Accessed: May 20, 2026. [Online]. Available: https://www.nationaltransport.ie/wp-content/uploads/2026/04/NTA_NHTS2024_IpsosBA_Report_Version-2_03March2026.pdf
- 113 A. C. Singh and B. Caulfield, 'Affluence, spatial spillovers, and inequality in household energy transitions: Exploring the determinants of sustainable technology adoption in Ireland', *Energy Research & Social Science*, vol. 134, 104637, Apr. 2026, <https://doi.org/10.1016/J.ERSS.2026.104637>
- 114 B. Caulfield, D. Furszyfer, A. Stefaniec and A. Foley, 'Measuring the equity impacts of government subsidies for electric vehicles', *Energy*, vol. 248, 123588, Jun. 2022, <https://doi.org/10.1016/J.ENERGY.2022.123588>
- 115 Central Statistics Office, 'TEM27 – New and secondhand private cars'. Accessed: May 20, 2026. [Online]. Available: <https://data.cso.ie/table/TEM27>
- 116 A. Charly and B. Caulfield, 'Transport emission modelling based on a bottom-up approach to facilitate sustainable transport planning', *Sustainable Futures*, vol. 9, 100435, Jun. 2025, <https://doi.org/10.1016/J.SFTR.2025.100435>
- 117 Transport & Environment, 'Social Leasing: How Low-price EVs Can Help Transport Vulnerable Drivers', May 2025. Accessed: May 18, 2026. [Online]. Available: https://uploads.transportenvironment.org/production/files/2025_05_Briefing_1_EU_social_Leasing.pdf
- 118 European Commission, 'Social Climate Fund'. Accessed: May 21, 2026. [Online]. Available: https://employment-social-affairs.ec.europa.eu/policies-and-activities/funding/social-climate-fund_en
- 119 European Commission, 'Commission notice – Guidance on the Social Climate Plans'. Accessed: May 18, 2026. [Online]. Available: https://commission.europa.eu/document/download/8915fc4b-5614-4082-b4cb-d308cf6aa0cf_en?filename=C_2025_881_1_EN_ACT_part1_v3.pdf
- 120 European Alternative Fuels Observatory, 'Sweden's Climate-Social Plan boosts access to electric mobility'. Accessed: May 18, 2026. [Online]. Available: <https://alternative-fuels-observatory.ec.europa.eu/general-information/news/swedens-climate-social-plan-boosts-access-electric-mobility>



- 121 Octopus Energy, 'Power Pack Bundle eligibility criteria'. Accessed: May 18, 2026. [Online]. Available: <https://octopusenergy.com/power-pack-bundle/terms>
- 122 European Alternative Fuels Observatory, 'Germany's 2026 EV incentive programme: Supporting socially targeted EV uptake'. Accessed: May 18, 2026. [Online]. Available: <https://alternative-fuels-observatory.ec.europa.eu/general-information/news/germanys-2026-ev-incentive-programme-supporting-socially-targeted-ev>
- 123 Zero Emission Vehicles Ireland, 'New data shows Ireland's used EV market continuing to strengthen in 2025'. Accessed: May 18, 2026. [Online]. Available: <https://www.zevi.ie/news/new-data-shows-irelands-used-ev-market-continuing-to-strengthen-in-2025>
- 124 DoneDeal Cars, 'Used EV prices stabilise as the market matures and new prices settle'. Accessed: May 18, 2026. [Online]. Available: <https://www.zevi.ie/sites/default/files/2025-10/Full-Report-DoneDeal-Cars-Price-Index-H1-2025-FINAL.pdf>
- 125 Cartell.ie, 'Used electric car sales in Ireland rise 31% in 2025 as EV market grows'. Accessed: May 20, 2026. [Online]. Available: <https://www.cartell.ie/2026/01/used-electric-car-sales-in-ireland-2025/>
- 126 ERM, 'Understanding the Tail of the Electric Vehicle Transition', Jun. 2024. Accessed: May 18, 2026. [Online]. Available: <https://www.theccc.org.uk/wp-content/uploads/2025/02/Understanding-the-tail-of-the-electric-vehicle-transition-ERM.pdf>
- 127 Sustainable Energy Authority of Ireland, 'Fuel price comparison'. Accessed: May 21, 2026. [Online]. Available: <https://www.seai.ie/plan-your-energy-journey/for-your-home/electric-vehicles/buying-an-ev/fuel-cost-comparison>
- 128 Department for Transport (UK) and Office for Zero Emissions Vehicles, 'Cross-pavement solutions for charging electric vehicles'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.uk/government/publications/cross-pavement-solutions-for-charging-electric-vehicles/cross-pavement-solutions-for-charging-electric-vehicles>
- 129 Department of Transport, 'Draft National Policy Framework for Alternative Fuels Infrastructure', Dec. 2024. Accessed: May 18, 2026. [Online]. Available: <https://assets.gov.ie/static/documents/draft-national-policy-framework-for-alternative-fuels-infrastructure.pdf>
- 130 European Alternative Fuels Observatory, 'Target tracker – Ireland'. Accessed: May 18, 2026. [Online]. Available: <https://alternative-fuels-observatory.ec.europa.eu/transport-mode/road/ireland/target-tracker>
- 131 Zero Emission Vehicles Ireland and Transport Infrastructure Ireland, 'ZEV I TII EV Recharging Infrastructure Light Duty Vehicle (LDV) National Road Grant Scheme phase 3'. Accessed: May 18, 2026. [Online]. Available: https://assets.gov.ie/static/documents/49523ec5/20251007_AFI_LDV_Phase_3_Illustrative_map_of_successful_Applicant_Sites.pdf
- 132 R. Singh, C. Quinn and D. MacKenzie, 'Poor reliability of public charging stations can impede the growth of the electric vehicle market', *Transport Policy*, vol. 171, pp. 695–705, Sep. 2025, <https://doi.org/10.1016/J.TRANPOL.2025.06.026>
- 133 Department of Transport and Zero Emission Vehicles Ireland, 'Draft Strategy for Data Concerning Electric Vehicles Recharging Infrastructure'. Accessed: May 18, 2026. [Online]. Available: <https://www.zevi.ie/sites/default/files/2026-02/strategy-for-data-concerning-electric-vehicles-recharging-infrastructure-plan-english.pdf>
- 134 International Council on Clean Transportation, 'Race to zero: European heavy-duty vehicle market development quarterly (January–December 2025)'. Accessed: May 18, 2026. [Online]. Available: <https://theicct.org/publication/r2z-eu-hdv-market-development-quarterly-jan-dec-2025-mar26/>



- 135 International Council on Clean Transportation, 'European heavy-duty vehicle market development quarterly (January–December 2025)'. Accessed: May 18, 2026. [Online]. Available: https://theicct.org/wp-content/uploads/2026/03/ID-565-%E2%80%93-EU-HDV-Q1%E2%80%93Q4-2025_market-spotlight_final-1.pdf
- 136 International Transport Forum, 'Financing the Electrification of Heavy-duty Vehicles', 2025. Accessed: May 18, 2026. [Online]. Available: <https://www.itf-oecd.org/sites/default/files/docs/financing-electrification-heavy-duty-vehicles.pdf>
- 137 Freight Transport Association Ireland, 'Decarbonising the Road Freight Sector – Ireland', 2024. Accessed: May 18, 2026. [Online]. Available: <https://inverenergy.ie/wp-content/uploads/2024/07/FTAI-Decarbonising-the-Road-Freight-Sector-2024.pdf>
- 138 Department of Transport, 'Government expands zero emission HDV grants in major boost for Irish logistics sector'. Accessed: May 21, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/press-releases/government-expands-zero-emission-hdv-grants-in-major-boost-for-irish-logistics-sector/>
- 139 Sustainable Energy Authority of Ireland, 'EV fleet assessment support'. Accessed: May 18, 2026. [Online]. Available: <https://www.seai.ie/plan-your-energy-journey/for-your-business/ev-for-business/grants-and-supports/ev-fleet-assessment>
- 140 Parliamentary Budget Office, 'PBO analysis: School Transport Scheme 2022–2024'. Accessed: May 18, 2026. [Online]. Available: <https://app.powerbi.com/view?r=eyJrIjojNDY1MmRhNjUtZDdkZC00NmU2LWFlhNWYtYzFhODcyNTRhY2RkIiwidCI6ImNINzFY2YwLTBiOTctNDdiMi05NjZlLWI0ZWNjOGRiMjNmMjMlImMiOjI9&pageName=ReportSectionfb0ef1609917c5e8ad74>
- 141 National Transport Authority, 'eSPSV25 – Electric Small Public Service Vehicle Grant Scheme 2025'. Accessed: May 18, 2026. [Online]. Available: <https://www.nationaltransport.ie/news/espsv25-electric-small-public-service-vehicle-grant-scheme-2025/>
- 142 National Transport Authority, 'Electric SPSV Grant Scheme 2026'. Accessed: May 18, 2026. [Online]. Available: <https://www.nationaltransport.ie/news/electric-spsv-grant-scheme-2026/>
- 143 Department of Education and Youth, 'Summer Works Scheme'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-education/services/summer-works-scheme/>
- 144 Department of Transport, 'Renewable Transport Fuel Policy 2025–2027', Jun. 2025. Accessed: May 18, 2026. [Online]. Available: https://assets.gov.ie/static/documents/Renewable_Transport_Fuel_Policy_2025-2027_2.pdf
- 145 Transport & Environment, 'Where's your HVO been?' Accessed: May 20, 2026. [Online]. Available: <https://www.transportenvironment.org/articles/wheres-your-hvo-been>
- 146 Transport & Environment, 'Biofuels globally emit more CO₂ than the fossil fuels they replace – study', T&E. Accessed: May 18, 2026. [Online]. Available: <https://www.transportenvironment.org/articles/biofuels-globally-emit-more-co2-than-the-fossil-fuels-they-replace-study>
- 147 Houses of the Oireachtas, 'Renewable energy generation – Dáil Éireann debate'. Accessed: May 18, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2026-04-28/392/>
- 148 Ville de Paris, 'Un nouveau plan vélo pour une ville 100% cyclable'. Accessed: May 21, 2026. [Online]. Available: <https://www.paris.fr/pages/un-nouveau-plan-velo-pour-une-ville-100-cyclable-19554>
- 149 Centre for Cities, 'How we move'. Accessed: May 21, 2026. [Online]. Available: <https://www.centreforcities.org/reader/accelerating-net-zero-delivery/how-we-move/>



- 150 A. Shaw, 'Dublin Metropolitan Area Walking and Cycling Index 2025 – Foreword'. Accessed: May 18, 2026. [Online]. Available: <https://www.nationaltransport.ie/wp-content/uploads/2026/03/260306-Walking-and-Cycling-Index-Dublin-DIGITAL-v5A.pdf>
- 151 Department of Transport, 'Ministers assure funding for active travel teams in local authorities for a further five years'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/press-releases/ministers-assure-funding-for-active-travel-teams-in-local-authorities-for-a-further-five-years/>
- 152 Department of Public Expenditure and NDP Delivery and Reform, 'Budget 2024 Expenditure Report', 2024. Accessed: May 18, 2026. [Online]. Available: <https://assets.gov.ie/static/documents/budget-2024-expenditure-report.pdf>
- 153 Department of Public Expenditure and NDP Delivery and Reform, 'Budget 2025 Expenditure Report', 2025. Accessed: May 18, 2026. [Online]. Available: <https://assets.gov.ie/static/documents/budget-2025-expenditure-report.pdf>
- 154 Department of Transport, '€517 million for Ireland's national roads and greenways in 2024'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/press-releases/517-million-for-irelands-national-roads-and-greenways-in-2024/>
- 155 National Transport Authority, 'Active Travel investment grants: 2024 allocations'. Accessed: May 18, 2026. [Online]. Available: <https://www.nationaltransport.ie/publications/active-travel-investment-grants-2024-allocations/>
- 156 Houses of the Oireachtas, 'Transport policy – Dáil Éireann debate'. Accessed: May 18, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2026-01-13/637/>
- 157 Houses of the Oireachtas, 'Active travel – Dáil Éireann debate'. Accessed: May 18, 2026. [Online]. Available: <https://www.oireachtas.ie/en/debates/question/2026-01-15/284/>
- 158 Road Safety Authority Ireland, 'Cyclist Spotlight Report: Fatalities and Serious Injuries 2020–2024', May 2025. Accessed: May 18, 2026. [Online]. Available: <https://www.rsa.ie/docs/default-source/road-safety/road-users/cyclist-spotlight-report-fatalities-and-serious-injuries-2020-2024.pdf>
- 159 Cycling Ireland, 'Road Safety Commission Member Survey Report', Feb. 2026. Accessed: May 18, 2026. [Online]. Available: https://www.cyclingireland.ie/downloads/CyclingIreland_MemberSurvey_WEB.pdf
- 160 Central Statistics Office, 'Sustainable mobility and transport 2021 – Cycling'. Accessed: May 18, 2026. [Online]. Available: <https://www.cso.ie/en/releasesandpublications/ep/p-smt/sustainablemobilityandtransport2021/cycling/>
- 161 Transport for Greater Manchester, 'Buy an e-bike for less'. Accessed: May 20, 2026. [Online]. Available: <https://beeactive.tfgm.com/ebike-subsidy-scheme/>
- 162 Sustainable Energy Authority of Ireland, 'Exploring the Elements of Private E-cargo Bike Use: A Mixed-methods Study', 2026. Accessed: May 18, 2026. [Online]. Available: https://www.seai.ie/sites/default/files/documents/research-project/RDDF00756-Final_report.pdf
- 163 R. Egan, H. Julianne and B. Caulfield, 'Keeping people cycling with the private e-cargo bike: Policy recommendations from a mixed-methods study', SEAI. Accessed: May 18, 2026. [Online]. Available: <https://www.seai.ie/sites/default/files/2025-10/Keeping-people-cycling-with-the-private-e-cargo-bike-policy-brief.pdf>
- 164 P. Polikakhina, A. Hassanpour, K. Yu, M. Winters and A. Bigazzi, 'Travel, Environmental, and Equity Impacts of Income-conditioned E-bike Rebates in British Columbia', Sep. 2025. Accessed: May 18, 2026. [Online]. Available: https://civil-reactlab.sites.olt.ubc.ca/files/2025/09/2025_UBC_FinalReport_BCEBikeRebateStudy.pdf



- 165 LEVA EU, 'E-bike sales pass several key milestones in Europe, with some exceptions'. Accessed: May 18, 2026. [Online]. Available: <https://leva-eu.com/e-bike-sales-pass-several-key-milestones-in-europe-with-some-exceptions/>
- 166 R. Egan, H. Julienne and B. Caulfield, 'A cyclist, a family or a vehicle? Claiming the road with the e-cargo bike', *Applied Mobilities*, vol. 11, pp. 58–78, Jan. 2026, <https://doi.org/10.1080/23800127.2026.2621569>
- 167 R. Egan, H. Julienne and B. Caulfield, 'Finding a place for the e-cargo bike: The parking and insurance practices of owners in Ireland', *Journal of Cycling and Micromobility Research*, vol. 5, 100078, Sep. 2025, <https://doi.org/10.1016/J.JCMR.2025.100078>
- 168 Department of Transport, Tourism and Sport, 'National Ports Policy 2013', 2013. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/publications/national-port-policy-2013/>
- 169 Government of Ireland, 'Climate Action Plan 2025', Apr. 2025. Accessed: Apr. 14, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-climate-energy-and-the-environment/publications/climate-action-plan-2025/>
- 170 Houses of the Oireachtas, 'Dáil Éireann debate – Questions on policy or legislation'. Accessed: May 18, 2026. [Online]. Available: https://www.oireachtas.ie/en/debates/debate/dail/2026-03-25/13/#spk_165
- 171 The Journal, "Major event" on M50 and other travel disrupted by flooding from Storm Chandra'. Accessed: May 18, 2026. [Online]. Available: <https://www.thejournal.ie/major-event-on-m50-and-other-travel-disrupted-by-flooding-from-storm-chandra-6939291-Jan2026/>
- 172 Department of the Taoiseach, 'National Emergency Coordination Group preparing for risk of further flooding in the wake of Storm Chandra'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-the-taoiseach/press-releases/national-emergency-coordination-group-preparing-for-risk-of-further-flooding-in-the-wake-of-storm-chandra/>
- 173 WASITUS.ie, 'Climate change increases flood risk associated with winter rainfall on east coast of Ireland'. Accessed: May 18, 2026. [Online]. Available: <https://wasitus.ie/events/climate-change-increases-flood-risk-associated-with-winter-rainfall-on-east-coast-of-ireland/>
- 174 WASITUS.ie, 'Human-caused climate change increases potential for flooding in south-eastern counties of Ireland as rainfall intensifies', Nov. 2025. Accessed: Feb. 09, 2026. [Online]. Available: <https://wasitus.ie/events/a-new-rapid-attribution-study-shows-human-caused-climate-change-has-increased-the-magnitude-and-likelihood-of-heavy-rainfall-events-that-contributed-to-flooding-during-storm-claudia/>
- 175 Department of Transport, 'Ministers announce €713 million for regional and local roads'. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/press-releases/ministers-announce-713-million-for-regional-and-local-roads/>
- 176 The Irish Times, 'Residents left 10 days without full water supply in aftermath of Storm Chandra'. Accessed: Feb. 11, 2026. [Online]. Available: <https://www.irishtimes.com/ireland/2026/02/06/residents-left-10-days-without-full-water-supply-in-aftermath-of-storm-chandra/>
- 177 Department of Transport, 'Rail Project Prioritisation Strategy', Dec. 2025. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/publications/rail-project-prioritisation-strategy/>
- 178 Department of Transport and Department for Infrastructure, 'All-island Strategic Rail Review', Jul. 2024. Accessed: May 18, 2026. [Online]. Available: <https://www.gov.ie/en/department-of-transport/publications/all-island-strategic-rail-review/>
- 179 Department of Transport and Department for Infrastructure, 'Strategic Flood Risk Assessment of the All-island Strategic Rail Review', Jul. 2024. Accessed: May 18, 2026. [Online]. Available: <https://assets.gov.ie/static/documents/strategic-flood-risk-assessment-of-the-all-island-strategic-rail-review.pdf>