



Rialtas na hÉireann
Government of Ireland

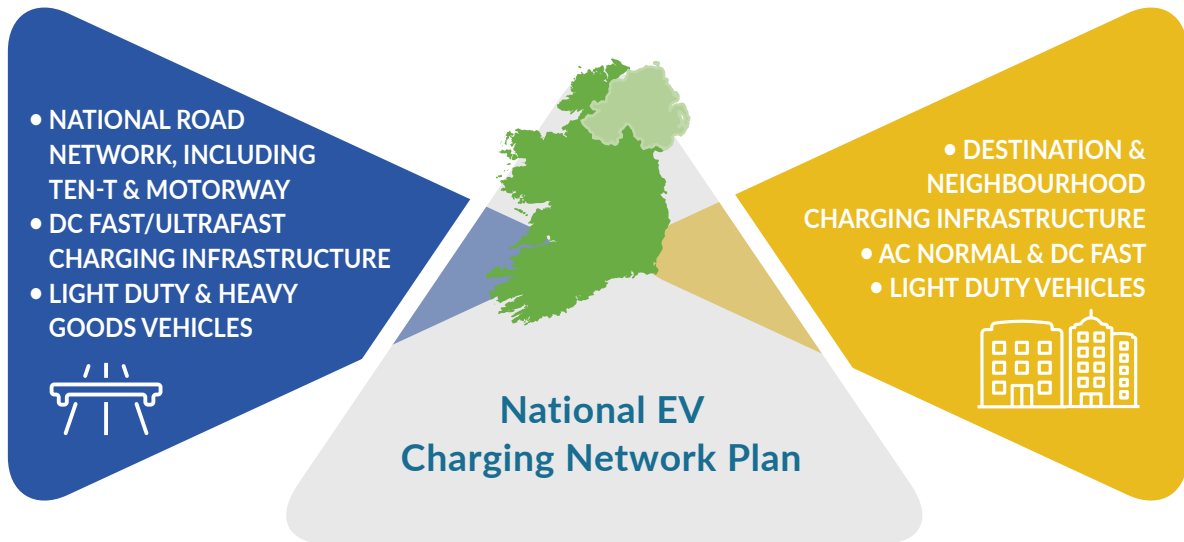
Regional and Local EV Charging Network Plan 2024-2030

EXECUTIVE SUMMARY

Department of Transport

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The Regional and Local EV Charging Network Plan constitutes the second part of a National EV Charging Network Plan, focussing on neighbourhood and destination charging locations. Zero Emission Vehicles Ireland (ZEVI) has already published the draft National Road Network EV Charging Plan focussing on the en-route, Motorway and Primary and Secondary Roads. Together, these plans form the National EV Charging Network Plan.



National Road Network EV Charging Plan

Regional and Local EV Charging Network Plan

Figure 1. The National EV Charging Network Plan will be a combination of this National Road Network EV Charging Plan and the Regional and Local EV Charging Network Plan.

Transitioning from a Business-led to a Plan-led Approach

In response to the need to support the coordinated expansion of the local electric vehicle (EV) charging network, the aim of this plan is to provide a way forward for the accelerated and equitable delivery of public EV charging infrastructure at regional and local levels to facilitate the shift to zero emission vehicles for all users, working towards achieving both national and European ambitions for cleaner transportation.

This document sets out the pathway to deliver on these ambitions at destination and

neighbourhood charging locations and lay the foundations for a self-sustaining public charging network that caters to all user needs. This plan supports the delivery of well-defined local and regional plans for a resilient and future-proofed network that minimises public funding supports and encourages participation from private stakeholders to drive delivery.

While at a national level these ambitions are defined mainly by the Climate Action Plan 2024 and the Electric Vehicle Charging Infrastructure Strategy 2022-2025, at a European level, the Alternative Fuels Infrastructure Regulation (AFIR) sets specific requirements and standards for the provision of accessible and efficient electric

charging infrastructure. These targets include an overall “fleet-based” target, requiring a total national power output based on the number of battery electric vehicles (BEVs) or plug-in hybrid vehicles (PHEVs) in the country by 2025 and 2030.

Detailed AFIR requirements are also provided for at Trans-European Transport Network locations to provide en-route, high-powered charging. After accounting for en-route charging requirements, the remaining national power requirements will be distributed and provided locally through destination and neighbourhood charging solutions:

- Destination charging entails providing charging at trip destinations so that visitors and local residents can top up their EV while they are undertaking business or leisure activities, and while their car is parked.
- Neighbourhood charging caters to residents to provide convenient, overnight charging opportunities in residential areas without access to off-street parking and home charging.

Destination and Neighbourhood EV Charging Network Targets

Taking onboard international and national learnings, national targets are defined to support the widescale implementation of an EV charging network to facilitate EV adoption across the country. To support EV adoption across EU Member States, AFIR was adopted in 2023 to provide a method for calculating top-down, minimum charging infrastructure requirements.

This top-down calculation, based on the forecasted EV uptake in Ireland, forms the basis of the national EV infrastructure targets. These targets have been broken down at a county level based on the historic and projected proportion of EVs to the locally registered vehicle fleet to provide local authorities with an indication of the likely minimum public charging power they are required to provide, independent of the charging provision along the National road network. Nationally, total power outputs of 169,253 and 562,244 kW are required at destination and residential locations by 2025 and 2030, respectively.

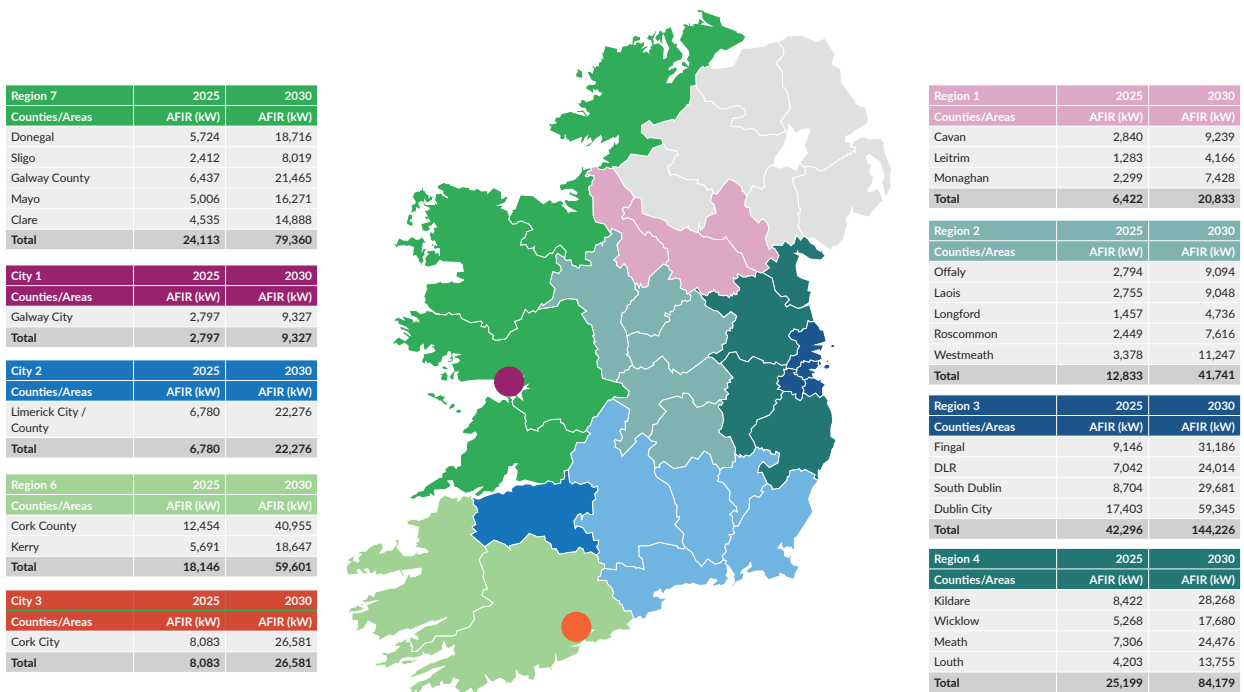


Figure 2. Summary of EV charging capacity requirements by 2025 and 2030 across the local authority areas.

Local Authorities' Critical Role in Accelerating Infrastructure Delivery

To achieve the ambitious GHG reduction targets required in the transportation sector, strategic planning of the charging network is required. Local authorities are ideally suited to accelerate the delivery of charging infrastructure at the local level that is financially sustainable and best ensures equitable access for all. Local authorities are well-positioned with:

- a deep understanding of local communities' needs,
- experience in delivering major infrastructure projects,
- ownership of suitable site locations,
- the ability to leverage private resources and funding through contracts and planning functions,
- the ability to align EV infrastructure projects with national and local policies, strategies and projects (e.g., climate action, active travel, e-mobility, demand management, housing and infrastructure projects), and
- the ability to co-ordinate and deliver projects across county borders in partnership with other local authorities.

Strategy planning and project delivery for regional and local EV infrastructure projects both optimises funding and resources in addition to enabling coordination across jurisdiction borders. The regional groups (Figure 2), approved in principle with the local authorities, can avoid the risks of insular, siloed planning and potential oversupply of infrastructure where demand does not warrant this while also ensuring there is sufficient infrastructure in rural and remote areas to meet future demand to ensure equitable access.

Over the course of 2024, local authorities will develop charging network strategies and implementation plans to identify high quality locations for charging infrastructure that both provides for and meets user needs and achieves national charging infrastructure requirements. These local strategies will determine the minimum charging requirements at destination and neighbourhood locations and also consider the best approach to partnering with the private sector, in order to leverage technical expertise, resources and private funding.

Significant work has already been done on strategy development with some local authority and regional strategies completed, while others are in the early stages of the process. While variations in pace over the coming months is inevitable, ZEVU will continue to provide supports such as funding for strategy development.

To overcome barriers to deployment, ZEVU is and will continue exploring financing mechanisms, standardisation efforts, regulatory streamlining, grid capacity planning, coordination among stakeholders, public education campaigns, and targeted incentives to encourage private investment in residential and destination EV charging infrastructure. To achieve Ireland's Climate Action Plan targets, a collaborative effort among stakeholders, particularly with the electrical grid (e.g., Eirgrid and ESBN), is essential to overcome the challenge of timely delivery.

Roadmap to Implementation

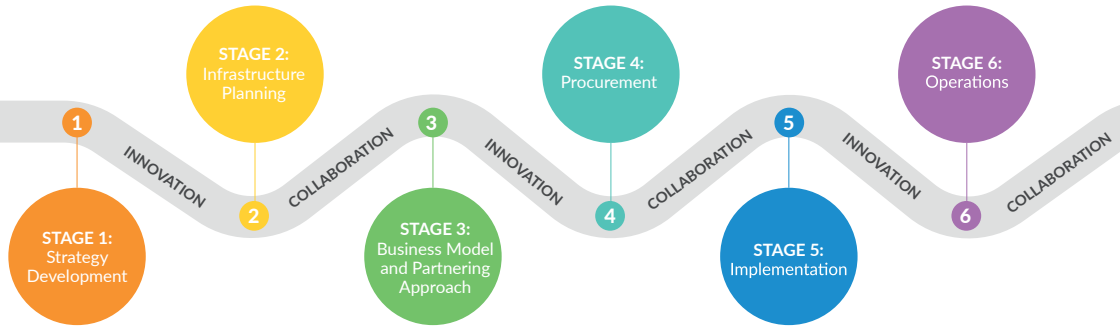


Figure 3. Key stages involved in implementing charging networks

Accelerating the implementation of a public EV charging network that meets current demand and equitably facilitates future EV adoption requires moving from a network predominantly driven by commercial viability concerns, to a planned approach that puts user needs at the centre of its development. This ensures that gaps are filled in the charging network, thereby addressing issues of equitable access to charging in areas that might otherwise be disregarded due to challenges of economic viability. To deliver the infrastructure required at scale, a six-stage project lifecycle will be employed within each regional/local area. This process begins with strategy development at a local and regional level to guide the subsequent stages towards the delivery and on-going operations of charging infrastructure at destination and neighbourhood locations.

Following their strategy development, in stage 2 of the project lifecycle, local authorities will identify shortlists of charging locations, which will be delivered in three phases (Table 1), to meet local charging targets. The phased approach to infrastructure delivery takes into consideration demand, funding availability, and the deliverability of different sites. A phased approach allows for the immediate roll out of early mover projects, with minimal barriers, while allowing for adequate planning to be put in place to deliver more

complex projects later on. Phasing allows local authorities to incorporate learnings along the way and adapt their plans providing an opportunity to fine-tune the infrastructure rollout, consider innovative solutions, and optimise coverage to meet user needs.

Delivering the local charging infrastructure outlined in this plan at the scale and volume required will be extremely challenging. Anticipating the risks involved and responding with mitigation measures is essential to minimising delays to implementation. Challenges such as lack of resources, funding availability, site availability, limited grid capacity, supply chain disruptions, planning permissions, and other potential legal challenges may all risk the rollout of the destination and neighbourhood infrastructure required to be deployed by 2025 and 2030. However, by proactively addressing these risks through strategic planning, stakeholder collaboration, and adaptive approaches, we can overcome these challenges and ensure the successful implementation of high quality and accessible charging infrastructure. By effectively managing these risks, we pave the way for widespread EV adoption, contribute to sustainable transportation, and foster a greener future for all.

Table 1. EV charging infrastructure delivery phases

Delivery Phase	Phase 1	Phase 2	Phase 3
Delivery period	To Q4 2025*	2026 to mid-2028*	Mid-2028 to Q4 2030*
Description	Sites at destination and neighbourhood locations to meet 2025 AFIR targets with minimal or no barriers to delivery, that meet most user needs, and are of strategic importance (e.g., geographical and seasonal spread).	Sites with barriers to delivery (e.g. planning permissions, electrical grid upgrades), but of strategic importance, at destination and neighbourhood locations to meet 2030 AFIR targets. Scaling at existing Phase 1 site locations, where required.	Sites with high barriers to delivery, but of medium and high strategic importance. Transition to data-driven planning, based on user demand at existing locations. Scaling at existing Phase 1 and 2 site locations, where required.
Review	Ongoing strategy review, assessment of gaps in the public charging network and user needs in line with EV adoption		
Deliverables	169,253 kW	562,244 kW	

*These dates are indicative, and contingent on local authorities' strategy development and local circumstances.

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