

E.DSO Feedback on the Alternative Fuels Infrastructure Regulation¹

Brussels, 12 August 2026

The review of the Alternative Fuels Infrastructure Regulation (AFIR) is of direct relevance to Distribution System Operators (DSOs) as the entities responsible for the grid connection of the electric vehicles (EVs) charging infrastructure. As DSOs, our role is to ensure that we can plan and deliver the electricity network capacity required to connect the charging infrastructure in line with the targets set out in AFIR. For this reason, E.DSO provided feedback to the AFIR review public consultation² launched by the European Commission on 31 July. Overall, E.DSO members support the objectives of AFIR review. Nevertheless, several points of concern need to be flagged and addressed by the Commission when presenting the concrete legal proposal.³ The following sections outline E.DSO members' views on the key aspects of the proposed consultation, namely: on the adequacy of the target-setting mechanisms within AFIR; on the definition of targets for shipping and vessels; and on other measures that should be considered when revising AFIR.

1. Adequacy of target setting mechanisms within AFIR

E.DSO members support the definition of specific targets for road transport as they help with predictability and to ensure that charging points are where they are needed to support the energy transition. Nonetheless, **where these targets are defined, it is important that they remain closely aligned with actual market development and demand uptake.** While binding deployment targets provide regulatory certainty, they should also reflect realistic utilisation trajectories to ensure that deployed charging capacity is efficiently used and prevent that scarce electricity network capacity is not locked into underused assets. In practice, the locations for AFIR are largely based on proxy indicators such as population density and transport corridor coverage. While this provides a useful baseline for ensuring geographic distribution, it does not necessarily reflect the real evolution of charging demand.

¹ This paper provides a more detailed overview of the feedback submitted to the European Commission (due to the characters limitation).

² European Commission, Public consultation on the review of the Alternative Fuels Infrastructure Regulation (AFIR), [<https://alternative-fuels-observatory.ec.europa.eu/general-information/news/afir-review-shaping-europes-alternative-fuels-network>]

From a DSO perspective this is very important because in constrained parts of the distribution grid, available hosting capacity is limited and may require significant grid reinforcement. If charging infrastructure is deployed and then underused it can lead not only to inefficient use of grid capacity, but also to cost recovery challenges, as network investments are ultimately financed through capacity and energy-based grid tariffs paid by system users. The recovery of network costs relies on actual system use over time. Another issue of underutilised grid assets is a risk of inefficient grid investments unnecessarily burdening the end-customers and potentially creating affordability concerns. A more predictable and efficient framework should enable DSOs to anticipate charging needs, manage grid capacity through smart solutions and coordinate infrastructure deployment. This requires stronger information exchange and a more demand-responsive approach based on actual EV uptake, fleet electrification patterns and verified charging behaviour, supported by structured studies and scenario analysis to ensure that grid capacity is deployed where it is effectively used, supporting efficient investment planning from a DSO perspective and reducing the risk of stranded or underutilised assets.

2. Definition of targets for shipping and vessels

Mandatory infrastructure targets are important – however, to ensure the electrification of shipping, these targets are not sufficient on their own. For onshore power supply (OPS), deployment depends not only on port-side equipment, but also on distribution-grid capacity, anticipatory grid planning, cost recovery, transparent pricing and coordination between ports, DSOs, electricity suppliers and ship operators. Recent work on European OPS business models shows that ports follow different governance archetypes, with varying arrangements for electricity provision, pricing and grid coordination. Related welfare and grid-stability modelling show that OPS market design can affect pricing, investment incentives, consumer protection and network stability.

AFIR implementation should therefore **be complemented by port-DSO coordination plans, adequate financing mechanisms, anticipatory grid planning, transparent cost-allocation rules and supplier-access principles**. The implementation of AFIR and FuelEU Maritime⁴ should be closely aligned by synchronising port infrastructure deployment with ship obligations, promoting EU-wide technical interoperability, coordinating investments for future low-carbon fuels and ensuring attractive pricing for shore-side electricity. In this sense, we see that certain proposals can help the practical application of new electrified uses for OPS, such as the extension of OPS obligations to Roll-on/Roll-off cargo, including car carriers and battery charging infrastructure for ferries and port service vessels. The recognition of OPS combined with Simultaneous

⁴ Regulation (EU) 2023/1805 on the use of renewable and low-carbon fuels in maritime transport ([FuelEU Maritime](#))

Operations (SIMOPS) and a harmonised EU-level guidance, allowing coexistence with bunkering of other fuels, are equally relevant.

3. Other measures that should be considered when revising AFIR

E.DSO members note that the current AFIR framework establishes deployment targets for electric vehicle charging infrastructure based on transport demand and network coverage. However, achieving these targets will increasingly depend both on identifying suitable locations as well as on ensuring that the electricity distribution network is able to connect and distribute electricity to the charging infrastructure within the required timelines. DSOs are already experiencing a rapidly growing number of connection requests as the electrification of end uses, such as transport, and other large load customers such as BESS or data centres, requires grid capacity. In this context, the deployment of high-power charging infrastructure for heavy-duty vehicles (HDV) is particularly challenging. Enabling Megawatt charging along the Trans-European Transport Network (TEN-T) may require significant reinforcement of the distribution grid and capacity availability from the Transmission System Operator (TSO) grid on the TSO/DSO interconnection before connections can be made. This makes it increasingly **important to better align infrastructure deployment planning with electricity network development planning**. The AFIR review should therefore consider complementing geographical deployment requirements with a stronger focus on electricity network readiness. This could include the following measures as described in the following four sub-sections.

3.1. Strengthening the link between AFIR planning and electricity network investment planning

AFIR already provides a clear indication of where charging infrastructure is expected to be deployed. This is a valuable planning signal for DSOs. However, in practice, network reinforcement is still typically triggered only once a formal connection request is submitted. At that stage, timelines for design, permitting and construction may already make it difficult to ensure timely connection of charging infrastructure.

To address this, the framework should better link identified AFIR deployment locations with electricity network investment planning. In particular, the regulatory framework could enable DSOs to undertake **proactive investments in network reinforcements** in locations identified under AFIR, ahead of formal connection requests, where these investments are reasonably justified by expected deployment.

Such an approach would improve alignment between transport and energy infrastructure planning, allowing grid reinforcements to be delivered in advance of connection

applications. This would help reduce connection lead times, improve investment efficiency, and support the timely delivery of AFIR objectives. This should be designed in a way that respects the technological neutrality of DSOs, which must remain able to accommodate all types of electricity demand. It should also be supported by **stronger coordination between relevant stakeholders, including charge-point operators (CPOs), fleet operators, ports and DSOs, through more systematic forward-looking data sharing on deployment timelines**, charging demand, and site-specific plans. Greater visibility of future infrastructure needs would allow DSOs to better prioritise investments and optimise network planning. Revisiting the targets under AFIR may also require developing dedicated financing mechanisms and network tariff arrangements allowing strategic grid investments without placing the full cost on the first users connecting to the network.

3.2. Integration of capacity considerations

The AFIR revision should also encourage greater consideration of electricity network hosting capacity in the early stages of charging infrastructure planning. This includes **identifying grid constraints upfront and assessing appropriate technical or operational solutions where capacity is limited**. In this context, structured consultation with the relevant DSO during the planning of charging locations should be strengthened, particularly for high-power charging infrastructure hubs. Such consultation would help ensure that grid constraints and technical feasibility are properly reflected when selecting suitable sites. DSOs are best placed to provide up-to-date information on local network conditions, including available hosting capacity, anticipated congestion points and planned reinforcement works under existing network development plans.

3.3. Integrating flexibility solutions

To make more efficient use of existing network capacity, flexibility solutions should play an enabling role. Charging infrastructure should be **smart charging-ready by default**, allowing charging demand to be adjusted in response to system conditions, price signals, or local network constraints. This can improve the utilisation of existing grid capacity, reduce peak demand, and limit the need for immediate reinforcement. Where appropriate and feasible, **flexible connection agreements** could further support accelerated deployment. By allowing temporary or dynamic limitations on connection capacity while permanent reinforcements are being implemented, such arrangements can enable earlier grid connection, reduce delays, and improve overall system utilisation. In addition, AFIR could consider supporting the installation of grid friendly solutions such as battery collocation or use of locally produced renewable energy. In any case, the use of battery storage should remain fully compliant with applicable grid connection requirements and technical standards.

3.4. Linking AFIR implementation with DSO digitalisation

Effective implementation of AFIR depends on the digital readiness of DSOs. Better network models, monitoring and forecasting tools enable more accurate assessments of where charging infrastructure can be connected and improve coordination between transport and energy planning. Supporting these capabilities requires a more balanced approach to network financing, combining CAPEX for grid reinforcement with OPEX to fund digitalisation, data management and advanced system operation. This allows DSOs to deploy flexibility services and other non-wired solutions that can efficiently manage constraints alongside targeted grid reinforcement, particularly in rapidly growing areas such as electric mobility. This **does not replace the need for grid reinforcement where it is required, but it helps optimise investment timing and sequencing**. Targeted EU and national funding could further accelerate DSO digitalisation and the deployment of these enabling technologies.

4. Conclusion

E.DSO members support the overarching objectives of the AFIR revision. However, the effectiveness of the regulation will depend on ensuring that infrastructure deployment targets are aligned with market development, actual demand uptake and the capacity of the electricity system to enable timely and efficient connections. As electrification of transport accelerates, ensuring the availability of grid capacity will become increasingly important. The revised AFIR framework should **therefore strengthen the link between charging infrastructure planning and electricity network planning, while supporting improved data exchange, consideration of local hosting capacity, flexibility solutions and digitalisation**. This will enable DSOs to anticipate future needs, optimise investments and facilitate the timely connection of charging infrastructure. A coordinated approach involving public authorities, DSOs, CPOs, fleet operators, ports and other relevant stakeholders will be essential to ensure that AFIR delivers on its objectives while supporting an efficient, reliable and cost-effective transition towards electrified transport.