

DELEGATION OF THE EUROPEAN UNION TO MONTENEGRO

**NATIONAL POLICY FRAMEWORK FOR
ALTERNATIVE FUEL INFRASTRUCTURE**

Draft June 2026



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Technical assistance for capacity building and improved
legal harmonization, performance and efficiency within
the transport sector in Montenegro

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ABBREVIATIONS	
AFIR	Alternative Fuels Infrastructure Regulation
API	Applied Protocol interface
CCS	Combined Charging System, Type 2 and Combo 2
CEDIS	Crnogorski elektrodistributivni system (Montenegrin Electricity Distribution System)
DSO	Distribution System Operator
EPCG	Elektroprivreda Crne Gore (Montenegrin Electric Enterprise)
EU	European Union
EV	Electric Vehicle
FEGP	Fixed Electrical Ground Power
HDV	Heavy Duty Vehicles
HRS	Hydrogen Refuelling Station
Km	Kilometre
LDV	Light Duty Vehicles
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
NECP	National Energy and Climate Plan
NPF	National Policy Framework
SSE	Shore-side Electricity
TEN-T	Trans-European Transport Network

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1. Introduction

A draft National Policy Framework (NPF), in accordance with Article 14 of the Alternative Fuel Infrastructure Regulation (AFIR), has been prepared by the Ministry of Transport, in cooperation with the Ministry of Energy and Mining, along with other key authorities involved in the development of alternative fuel infrastructure in transport.

For Montenegro, a candidate country for European Union (EU) membership, AFIR is highly relevant despite not yet being binding. Montenegro has committed to aligning its transport and energy policies with the EU acquis as part of the accession process. Under the framework of the Transport Community Treaty (which Montenegro joined in 2017), Western Balkan countries, including Montenegro, are working to integrate their transport networks with the EU's and adopt EU standards. This includes developing the NPF for alternative fuels and planning infrastructure to meet AFIR's requirements. Achieving AFIR compliance seen as a key step toward decarbonising transport and enhancing connectivity in the region. AFIR's relevance for Montenegro is thus twofold: It is a blueprint for modernising the country's transport energy system in line with European best practices, and it will likely become a binding obligation in the near future as Montenegro progresses toward EU accession. Moreover, meeting AFIR targets is essential for Montenegro to ensure interoperability with EU transport corridors - especially as Trans-European Transport Network (TEN-T) core routes extend into the Western Balkans - and to access certain EU funds for infrastructure development.

AFIR is a new EU regulation (Regulation (EU) 2023/1804) under the "Fit for 55" climate package, replacing the earlier Directive 2014/94/EU on alternative fuels infrastructure. AFIR establishes, for the first time, legally binding targets for the deployment of publicly accessible charging and refuelling infrastructure for various transport modes across Europe.

In addition to the main regulation, AFIR is complemented by Commission Implementing Regulation (EU) 2025/655, which lays down detailed rules on data provision, technical specifications, and reporting requirements necessary to ensure uniform implementation across Member States. This Implementing Regulation specifies, inter alia, the data elements to be reported for alternative fuels infrastructure, the structure and functioning of National Access Points, and the modalities for making infrastructure data available to users and EU-level platforms.

Key elements of AFIR include required coverage of electric recharging stations along the TEN-T (e.g. fast charging pools at least every 60 kilometre (km) on core TEN-T roads by 2025), targets Heavy Duty Vehicle (HDV) charging at defined intervals and at safe parking areas, hydrogen refuelling station deployment, Shore-side Electricity (SSE) in ports, and provision of electricity to stationary aircraft at airports. It also sets fleet-based benchmarks such as ensuring 1.3 kilowatt of public charging power per battery electric Light duty vehicle (LDV) registered, to ensure infrastructure keeps pace with electric vehicle (EV) growth, and emphasises user-friendly aspects such as common payment systems, price transparency, and reliable public access to infrastructure information, as further operationalised through the Implementing Regulation (EU) 2025/655.

In summary, while Montenegro is not yet legally bound by AFIR, the regulation provides a clear benchmark for the country's alternative fuel infrastructure development. Closing the gap between the current baseline and AFIR's standards will be critical for successful integration into the EU transport network and for achieving Montenegro's own climate and energy objectives.

1.1 Consultation process

During the preparation of the NPF, the Ministry of Transport will coordinate an inclusive consultation process involving relevant ministries, public authorities, private stakeholders, and other interested parties.

The drafting process builds on an extended internal coordination phase led by the Ministry of Transport, involving close collaboration with relevant ministries and national authorities to ensure alignment with national policies and regulatory requirements.

In particular, the following activities are foreseen:



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- The Ministry of Transport will publish information on the preparation of the draft National Policy Framework on its official website and invite stakeholders to provide written input. Feedback is expected from industry associations, companies, municipalities, and public institutions.
- A stakeholder workshop will be organised to present the draft NPF and gather input from key stakeholders across sectors. The workshop will provide an opportunity for dialogue and discussion of proposed measures and priorities.
- Additional coordination with other Regional Partners in the Western Balkans as part of the ongoing work under the Transport Community, with making a regional roadmap.

The Ministry of Transport will be supported by an inter-institutional coordination group including representatives from relevant ministries and authorities, ensuring a coherent and cross-sectoral approach to the development of the NPF.

2.1 Reading guidelines

The structure of this NPF for Montenegro follows the general outline provided in the European Commission's guidance for reporting for Member States under Regulation (EU) 2023/1804.

Section 2 provides an overview of recent developments in the market for alternative fuels across relevant transport modes, including road transport and, where applicable, maritime, aviation and rail sectors. In addition, it presents the broader enabling framework for infrastructure deployment, including key aspects of the energy system, electricity generation mix and grid conditions. The section also highlights the main national measures supporting market uptake.

Section 3 presents the current state of play and the planned deployment of alternative fuels infrastructure, including recharging infrastructure for EVs, hydrogen refuelling infrastructure, and energy supply infrastructure in ports and airports, in line with the applicable regulatory requirements under AFIR.

Section 4 outlines the main policy measures and instruments introduced to ensure the achievement of the national targets and objectives set out in Section 3, in accordance with Article 14(2) of the Regulation

Section 5 describes additional measures to support the deployment of alternative fuels infrastructure beyond mandatory targets, including actions targeting captive fleets, private recharging, urban nodes, high-power recharging, accessibility, energy system integration, and the removal of administrative and regulatory barriers.

Section 6 provides an overview of the current situation, future perspectives and planned measures in areas not fully covered by mandatory targets, including maritime ports, rail transport and aviation.

The Annex 1: *Data submission under NPF and Art 18*, present supplementary information supporting the analysis and planning set out in the main report. It includes the national data submission in line with Article 14 and Article 18 of AFIR, based on the European Commission's Excel reporting template.

In accordance with the guidance, the tables from the Excel template are not reproduced in full but are included in an adapted format within the report to ensure readability while preserving the required data structure and content.



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2. Assessment of the market

This section provides an overview of the current state and recent developments of the market for alternative fuels in Montenegro across relevant transport modes, in line with Article 14(2)(a). It analyses the development of the vehicle fleet, the uptake of alternative fuel vehicles, and the availability of related infrastructure.

In addition, the section presents the broader enabling context for the deployment of alternative fuels infrastructure, including key aspects of the energy system, electricity generation mix and grid conditions. It also identifies key drivers, barriers, and trends shaping the market and influencing the pace of infrastructure deployment.

Road transport is by far the dominant mode in Montenegro's mobility system. The country's terrain is mountainous, and its rail network is limited, so most people and goods move by road. As of the end of 2024, Montenegro had over 300,000 registered road motor vehicles (including cars, trucks, motorcycles, and trailers). This represents a substantial increase from ~285,000 a year earlier, indicating a growing vehicle fleet. The majority of vehicles are passenger cars, followed by light commercial vehicles and then trucks, buses, and motorcycles. Podgorica, the capital region, alone accounts for about 97,000 registered vehicles (nearly one-third of the national fleet), reflecting its primacy in population and economic activity.

A striking characteristic of Montenegro's road fleet is its old age – the average vehicle is 17.3 years old (passenger cars average 17.6 years). Over 86% of cars are older than 10 years, and only 6% are under 6 years old. This implies that modern fuel-efficient or low-emission technologies penetrate slowly; many cars lack advanced emissions controls or fuel efficiency features present in newer models. Additionally, a sizable portion of cars in use are second-hand imports, predominantly diesel models from Western Europe.

In terms of network, Montenegro has about 7,000 km of roads, mostly two-lane highways and local roads. It lacks a completed national motorway, though one major motorway segment (Bar–Boljare highway, Phase 1) was recently built. The core routes (like along the Bar–Boljare corridor and the Adriatic-Ionian coastal corridor) are part of the extended TEN-T network (518 km designated). Road connectivity has historically been a challenge since mountain geography means many winding roads and bottlenecks. The government has an ambitious €9bn transport infrastructure development program to improve roads (and other modes), which will also influence future charging/refuelling station placement. For public transport, buses are the backbone, as intercity bus lines connect most towns, and urban transport is also bus-based (with mostly diesel buses currently).

Rail transport in Montenegro consists primarily of a north–south railway line from the Port of Bar through Podgorica and northwards to the Serbian border, complemented by a branch line from Podgorica to Nikšić and an additional short branch of approximately 25 km from Podgorica to the Albanian border (border crossing Božaj), which forms part of the TEN-T core network. The total railway network length is about 250 km. Crucially, the Bar–Podgorica–Serbia main line is electrified (standard catenary), enabling electric train operations, reflecting legacy infrastructure from the Yugoslav era. The Podgorica–Nikšić line is also electrified. By contrast, the Podgorica–Božaj (Albanian border) branch line is currently not electrified; however, design work for its reconstruction and modernisation, including electrification, is ongoing, indicating future alignment with electrified rail operations. Passenger rail services remain limited in frequency and speed and account for only a small share of overall passenger journeys, while freight rail plays a more significant role, particularly for the transport of heavy goods to and from the Port of Bar. As this rail electrification relies on conventional overhead power supply, it is not considered an “alternative fuel infrastructure” within the meaning of AFIR, as electric rail is the standard decarbonisation pathway for rail transport and lies largely outside the regulation's scope. Montenegro currently does not operate battery-powered or hydrogen trains; rail services rely on overhead electric traction on electrified sections and diesel locomotives on non-electrified stretches.

Maritime transport is important for trade and some passenger travel. Montenegro has one major seaport, Bar, which is a TEN-T Core maritime port on the Adriatic Sea. Bar handles freight (containers, bulk, etc.) and has a ferry link for passengers and vehicles to Bari, Italy. Other coastal towns (Kotor, Tivat) serve cruise ships and yachts: for instance, Kotor is a popular cruise destination (though not classified as TEN-T, it sees seasonal cruise traffic), and Tivat (Porto Montenegro) is a significant marina for yachts. For AFIR, only Bar is obligated as a core port. Currently, maritime operations are fully reliant on conventional fuels – ships use heavy fuel oil or marine



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diesel, and port machinery often runs on diesel. No shore power or Liquefied Natural Gas (LNG) bunkering is yet available. Domestic marine transport is minimal (no significant coastal shipping aside from small tourist boats). The lack of natural gas infrastructure extends to ports – there’s no LNG terminal or pipeline connection currently, which means any LNG refuelling for ships would require significant new infrastructure.

Aviation: Montenegro has two international airports, Podgorica (TGD) and Tivat (TIV). Podgorica is the larger hub and is on the TEN-T core network; Tivat, serving the coastal tourism region, is TEN-T comprehensive. Air travel is vital for tourism and connectivity, given the country’s location. In 2022, Podgorica handled around 1.2 million passengers, and Tivat about 0.9 million (figures rebounding post-pandemic). Air transport in the AFIR context concerns mainly ground operations: Supplying electricity to aircraft at stands. Currently, at both airports, aircraft typically use on-board auxiliary power units (small jet fuel turbines) or diesel ground power units for electricity and air conditioning when parked. There is no evidence of widespread fixed Electrical Ground Power units at gates yet in Podgorica or Tivat (no data was reported on existing installations). Modernisation plans for airports may include such equipment, but as of 2025, it is limited – meaning compliance with the AFIR requirement of On-Shore Power Supply at all gates by 2025 is lacking. Apart from this, Montenegro has no aviation use of alternative fuels (e.g., no electric aircraft in operations; any adoption of sustainable aviation fuels is outside our scope and minimal at best in 2025).

Energy system and electricity mix (high-level, relevant for AFIR)

Montenegro’s energy system is unique in that it has a significant share of renewable electricity but still relies on fossil fuels for transport and heating. Understanding the electricity mix is important since EV charging and other electrification measures’ environmental benefits depend on how clean the grid is.

Electricity generation in Montenegro is dominated by three major facilities: Perućica and Piva hydropower plants – large hydroelectric stations built in the mid-20th century. - Pljevlja Thermal Power Plant – a coal-fired power plant (225 MW) in the north, operational for over 40 years. These, along with numerous small hydro plants and a couple of wind farms (Krnovo and Možura), form the backbone of supply. In a typical year, renewables (hydro + wind) contribute around 55–60% of domestic electricity production, and the coal plant about 40–45%. For example, in an average hydrology year, hydro might provide ~50% and coal ~45%, with wind and solar adding a few percent. This means the grid’s carbon intensity is moderate – lower than a coal-dependent grid, but higher than a fully renewable system. Notably, the Pljevlja plant’s continued operation (recently undergoing an ecological retrofit) is intended until at least 2035 for energy security, but the government also plans more wind and solar projects that will gradually increase the renewable share.

Montenegro is part of a regional power market and at times imports electricity, especially in dry seasons or when Pljevlja is offline. Conversely, in wet periods, it can export hydro power. This interconnection means EV charging could sometimes be using imported electricity (from the regional grid, which might include coal-heavy sources in neighbouring countries), although typically, much of the EV charging would be met by local generation.

For transport fuels, Montenegro has no domestic oil production or refineries. It imports all petroleum products (liquefied petroleum gas (LPG), diesel, gasoline) via Port of Bar or through neighbouring countries. There is no natural gas pipeline network in Montenegro; thus, Compressed Natural Gas or LNG use in transport is effectively zero in 2025. The government has shown interest in the proposed Ionian-Adriatic Pipeline to bring natural gas into Montenegro in the future. But as of now, gas is not part of the energy mix for transport or other sectors, apart from bottled LPG use in households and some vehicles. LPG is used by a minority of vehicles, ~3.5% of transport energy, primarily via aftermarket conversion kits allowing cars to run on propane/butane. LPG filling stations exist in the country for these users, but LPG is not an AFIR-targeted fuel.¹

One relevant aspect is that electricity accounts for only ~1.5% of transport energy consumption as of 2022² which reflects the train electricity usage plus the small number of EVs. Diesel’s share in transport energy is about 80%, gasoline ~15%, and LPG ~3–4%. Thus, transport remains the most oil-dependent sector in Montenegro’s energy balance. Transport also has grown as an emitter of greenhouse gases, accounting for roughly 20% of

¹ The energy sector in Montenegro [Bankwatch Network](#)

² Energy Community [NECP](#) for Montenegro



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national Greenhouse Gas emissions and projected to rise toward 30% without intervention³. This explains why decarbonising transport (through electrification and alternative fuels) is recognised as a priority for meeting climate targets.

From the electric grid perspective, the current EV fleet (on the order of 1000+ vehicles) is too small to significantly impact electricity demand or load patterns. As EV numbers grow, charging could add load mostly in residential areas or along highways; given Montenegro's ample renewable potential, accommodating EV charging with clean power is feasible if managed well. One consideration for infrastructure planning is that coastal and mountain regions might have grid capacity constraints (especially in tourist hotspots in summer when both air conditioning load and EV tourist charging might coincide). However, with only tens of charging stations so far, these issues haven't yet become critical.

In terms of institutional setup, the national electric utility Elektroprivreda Crne Gore (EPCG) is state-owned and plays a key role in generation and supply. The distribution grid operator Crnogorski elektrodistributivni sistem (CEDIS) ensures last-mile delivery. Any widespread deployment of public chargers will likely involve coordination with EPCG and CEDIS for grid connections. It's worth noting that EPCG has signalled interest in renewables and new business models, which could include EV charging services. Also, an Eco Fund (environmental fund) has been established to finance green projects, including EV incentives and potentially charging infrastructure, using revenues from environmental fees, etc.⁴

In summary, Montenegro's broader context for AFIR implementation is characterised by a number of favourable conditions. The electricity system has a relatively high share of renewable energy, meaning that electrification of transport can contribute effectively to emission reductions. At the same time, the absence of natural gas infrastructure positions Montenegro to transition directly towards electrification and, over time, hydrogen-based solutions, in line with the EU's long-term decarbonisation pathway.

This context supports a focused development of alternative fuels infrastructure based on electricity and renewable energy, while highlighting the importance of continued grid development and system planning to accommodate future charging demand. Building on this, a range of national strategies and legislative frameworks provide the policy basis for the development of alternative fuels infrastructure, as outlined in the following section.

2.1 Supporting strategies and legislations

While a singular, comprehensive "Alternative Fuels Law" transposing AFIR does not yet exist, several foundational strategies and laws establish the basis for transport decarbonisation.

National Energy and Climate Plan of Montenegro (NECP) (*Nacionalni energetska i klimatski plan Crne Gore*)⁵: Formally adopted in December 2025, this is the overarching strategic document outlining the country's decarbonisation goals. It explicitly incorporates the promotion of alternative fuels and e-mobility as a measure and allocates budget lines for their development. The clearest KPIs identified within this document are at least 35,000 electric passenger vehicles by 2030, support for 50 fast and 500 slow chargers.

Transport Development Strategy 2019–2035⁶: The principal transport policy document currently undergoing an update regarding the Action Plan 2026–2027 and an evaluation report for the 2020–2024 period. The updated strategy will explicitly highlight initiatives related to green, low-emission vehicles, and sustainable and smart mobility.⁷

Medium-Term Program for the Construction, Reconstruction, Maintenance and Protection of State Roads in Montenegro until 2028⁸: Published in 2025, this program aligns with AFIR by indicating the necessity of the

³ Electric Vehicle Charging Network in Montenegro: [Opportunities and Practical Information for Drivers](#)

⁴ EnerNETmob Project – [Financing schemes](#)

⁵ [National Energy and Climate Plan of Montenegro](#)

⁶ [Transport Development Strategy 2019–2035](#)

⁷ [Sustainable and Smart Mobility Strategy for the Western Balkans](#), pp. 10

⁸ Medium-Term Program for the Construction, Reconstruction, Maintenance and Protection of State Roads in Montenegro until 2028



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strategic placement of EV stations every 60 km along the Core Network and designating safe parking spaces for freight vehicles.

Draft Green Hydrogen Development Programme with Action Plan for the Period 2026-2028 (*Program razvoja zelenog vodonika sa akcionim planom za period 2026-2028*)⁹: Published as a draft in December 2025, this document sets the hydrogen-policy direction for energy, transport and industry. The clearest KPIs/actions identified related to AFIR are adopting a Law on Alternative Fuels Infrastructure (2026–2028), and providing a programme-level direction for hydrogen stations.

Energy Law (*Zakon o energetici*)¹⁰: Energy-sector framework law governing electricity, gas and renewable-energy obligations relevant to transport fuels. This law transposes the Electricity Integration Package and includes provisions that enable the integration of EV charging infrastructure and allow Distribution System Operators (DSOs) to invest in public charging networks.

Law on the Use of Energy from Renewable Sources (*Zakon o korišćenju energije iz obnovljivih izvora*)¹¹: Adopted in August 2024, this framework law promotes renewable energy in transport. It is supported by the 2026 secondary rulebooks that mandate fuel suppliers to place biofuels on the market, establish sustainability criteria, and create a biofuels database.

Proposal for the Law on Cross-border Energy Infrastructure Projects (*Predlog zakona o prekograničnim energetskim infrastrukturnim projektima* s Izveštajem sa javne rasprave*)¹²: Sent to Parliament in January 2026, this draft law transposes the revised TEN-E Regulation and expressly covers dedicated hydrogen infrastructure, smart grids, and equipment enabling the use of hydrogen in transport.

The following documents were identified as providing the broader strategic, technical, or fiscal context for alternative fuels and environmental policy in Montenegro. While not containing specific AFIR technical mandates in the current versions, they represent relevant supporting legislation:

National Strategy in the Field of Climate Change by 2030¹³ and **Low-Carbon Development Strategy for Montenegro**¹⁴: core policy frameworks for broader climate governance and decarbonization, as well as long-term decarbonisation direction.

Sustainable Transport Action Plan for Montenegro¹⁵: A non-binding action plan, focusing on promoting environmental sustainability through measures such as adjusting road-use fees, renewing the vehicle fleet, enforcing stricter vehicle standards, and improving databases.

Energy Policy of Montenegro until 2030¹⁶: Issued in 2011 and running till 2030, it is an older umbrella energy strategy relevant for grid, RES and system development.

Law on Roads (*Zakon o putevima*)¹⁷: Provides the primary legal basis for the road network, governing state-road management, roadside siting, and service-area issues.

Law on Road Transport (*Zakon o prevozu u drumskom saobraćaju*)¹⁸: Serves as the framework for public road-transport operations and sector governance, making it indirectly relevant to vehicle and fleet regulation

Law on Efficient Use of Energy (*Zakon o efikasnom korišćenju energije*)¹⁹: A framework law that establishes the legal basis for efficient energy use and energy-efficiency measures in final consumption.

⁹ [Draft Green Hydrogen Development Programme with Action Plan for the Period 2026-2028](#)

¹⁰ [Energy Law](#) ("Official Gazette of Montenegro", no.28/2025, 3/2026)

¹¹ [Law on the Use of Energy from Renewable Sources](#) ("Official Gazette of Montenegro", no.82/2024)

¹² [Proposal for the Law on Cross-border Energy Infrastructure Projects](#)

¹³ [National Strategy in the Field of Climate Change by 2030](#)

¹⁴ [Low-Carbon Development Strategy for Montenegro](#)

¹⁵ [Sustainable Transport Action Plan for Montenegro](#)

¹⁶ [Energy Policy of Montenegro until 2030](#)

¹⁷ [Law on Roads](#) ("Official Gazette of Montenegro", no. 82/2020)

¹⁸ [Law on Road Transport](#) ("Official Gazette of Montenegro", no. 71/2017 and 67/2019)

¹⁹ [Law on Efficient Use of Energy](#) ("Official Gazette of Montenegro", no. 57/2014, 3/2015 – corrections 25/2019, 140/2022, 84/2024)



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Secondary legislation on biofuels and RES in transport²⁰: This package of by-laws and rulebooks regulates the technical and accounting side of transport fuels. It establishes sustainability criteria for biofuels, bioliquids, and biomass fuels, creates a biofuels database, and sets the methodology for calculating the renewable energy share and supplier obligations in the transport

²⁰ [Regulation on the mandatory share of energy from renewable sources in the transport sector, Regulation on the method of calculating the share of energy from renewable sources in total final energy consumption, the energy content of fuels and the method of calculating total energy consumption,](#)



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3. Planning in compliance with mandatory infrastructure targets

The transition towards a fully developed alternative fuels ecosystem in Montenegro takes place from a relatively early-stage baseline and is shaped by a number of structural constraints. While initial progress has been made, the current market and institutional conditions still pose challenges for scaling up infrastructure and vehicle uptake in line with AFIR requirements.

Key barriers include the high upfront cost of EVs, combined with limited purchasing power, as well as an ageing vehicle fleet, which slows the natural turnover towards cleaner technologies. At the infrastructure level, development is constrained by limited charging availability outside urban areas and grid capacity limitations in certain locations, particularly affecting the deployment of high-power chargers required under AFIR. In addition, market uncertainty for investors, driven by currently low utilisation rates and an evolving regulatory framework, together with limited institutional and administrative capacity, continues to hinder the pace of rollout.

Looking ahead, Montenegro's alternative fuels market is expected to expand as the country advances its alignment with EU legislation, including the implementation of AFIR, and as the TEN-T network extends further into the Western Balkans. Access to EU funding instruments will be essential for enabling the scale of infrastructure deployment required.

At the strategic level, Montenegro has already established a clear policy direction and taken great initiatives with the Draft NECP (2024/2025), identifying transport electrification and AFIR as central pillars of the country's 2030 climate and energy objectives. Along with the Transport Development Strategy (2019–2035), recognising the need to modernise the vehicle fleet, improve air quality and integrate cleaner technologies into the transport system. Along the frameworks of the national policy foundation for planning in line with AFIR's mandatory infrastructure targets.

However, without targeted policy measures, strengthened institutional coordination and a coherent investment plan, the gap between current conditions and the levels required under AFIR will remain significant. This section, therefore, outlines the framework for planning in compliance with mandatory infrastructure targets, defining the scale of deployment required and the key barriers that must be addressed to ensure full alignment.

3.1 Recharging infrastructure for LDV

This section outlines the AFIR requirements for charging infrastructure for LDVs and assesses their implications for Montenegro in light of projected vehicle fleet development and current deployment, as illustrated on the



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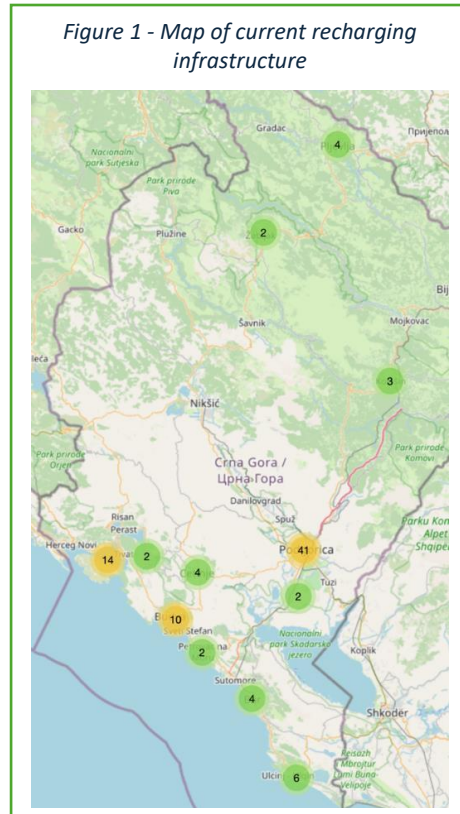
map. Under Article 3(1) of AFIR, Member States are required to ensure that publicly accessible charging infrastructure provides a minimum total power output of 3.1 kW per battery EV and 0.8 kW per plug-in hybrid EV. These requirements aim to ensure that infrastructure deployment keeps pace with the growth of the EV fleet. Montenegro’s current charging infrastructure remains at an early stage of development. Data on private charging infrastructure has not been reported, indicating a gap in monitoring and planning.

The existing network is predominantly composed of alternative currents (AC) chargers located in urban areas, with very limited high-power charging capacity.²¹

Crucially, there is no dedicated ultra-fast-charging ($\geq 150\text{kW}$)

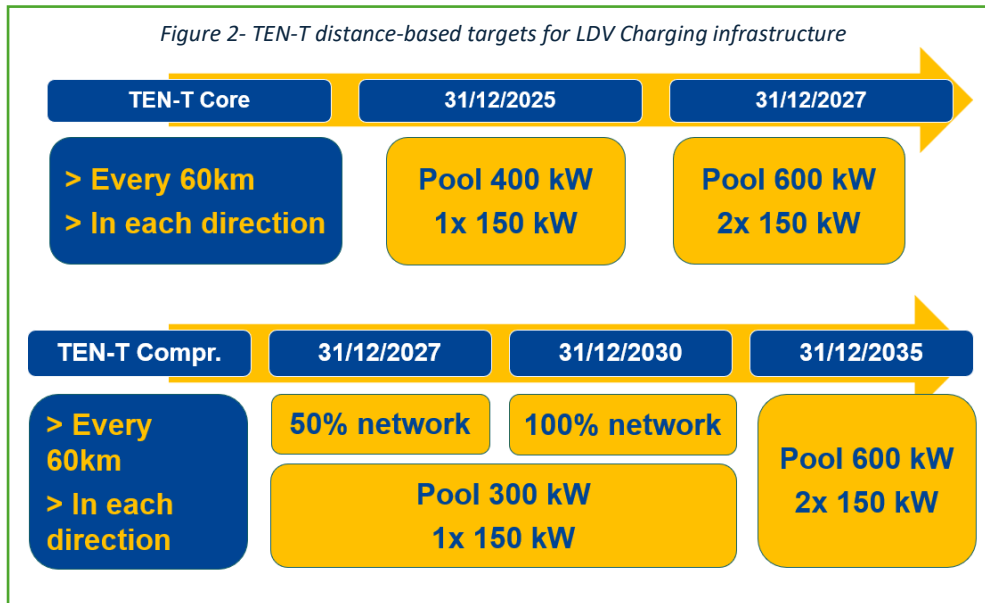
Table 1 – Current recharging infrastructure status, 2026 baseline

Indicator	Value	Share	AFIR Relevant
Public charging points	94		Total installed power 2,235 kW
Normal power (≤ 22 kW)	83	~88%	Insufficient for corridor charging
High power (> 22 kW)	11	~12%	Limited
Direct Current fast (< 150 kW)	10	~11%	Partial compliance
Ultra-fast (≥ 150 kW)	0	0%	Critical gap



infrastructure along the TEN-T road network, which spans 797 km. As a result, no charging pools currently meet the AFIR requirement of a maximum 60 km spacing along TEN-T corridors. This significantly constrains inter-urban EV mobility and highlights a major gap in AFIR alignment.

Figure 2- TEN-T distance-based targets for LDV Charging infrastructure



Similarly, national reporting indicates that while charging pools along TEN-T corridors remain very limited, initial deployment has begun and further infrastructure is planned. A charging station (4x50kW) has been built on

²¹ Table 1 is a simplified version of Table 2.1: Targets for Electric Recharging infrastructure for light duty vehicles in Appendix 1 Data submission under NPF and Art 18.



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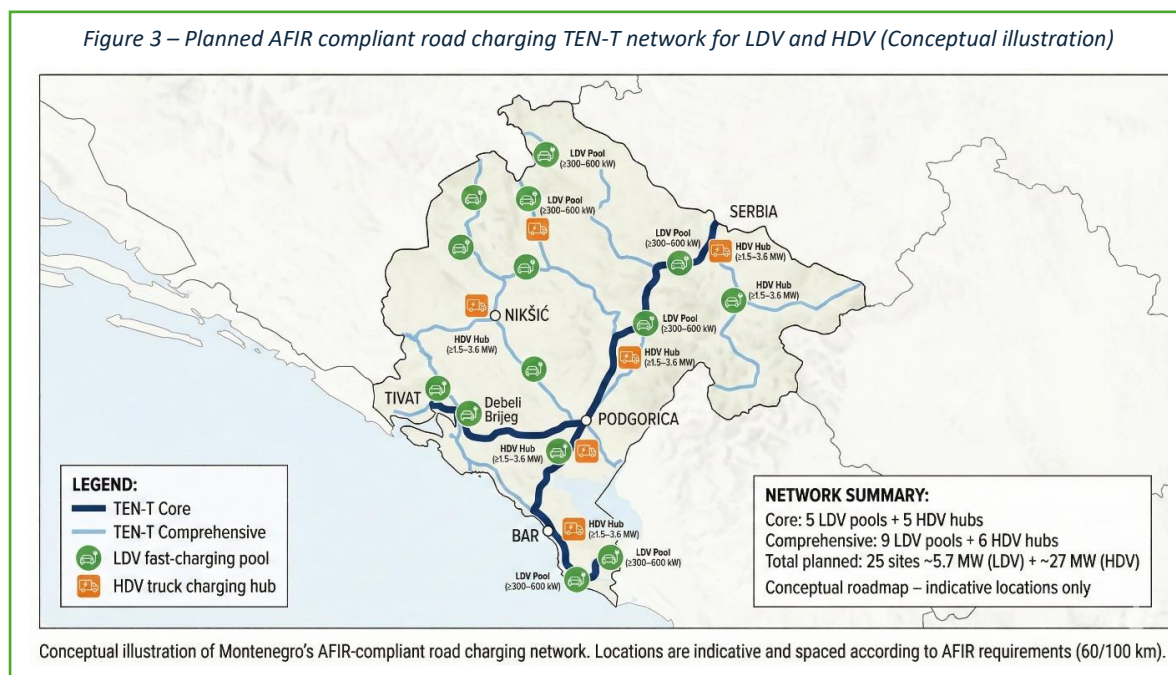
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Smokovac-Mateševo section at the Pelev Brijeg rest area, and the construction of facilities for users is underway at the Gornje Mrka rest area (4x60kW), and additional sites are under development or planned in accordance with Regulation (EU) 2023/1804. Despite these developments, the absence of a continuous, AFIR-compliant corridor network remains a key bottleneck for both domestic and cross-border electrified transport. Looking ahead, full alignment with AFIR requirements would require a substantial expansion of charging infrastructure along the TEN-T network. Based on indicative calculations.

Table 2 – Estimated TEN-T recharging infrastructure needs for LDV

Network	LDV pools	Each of	Power
Core - 279 km	5	≥600 kW at intervals of ≤60 km	~3 MW
Comprehensive - 518 km	9	≥300 kW at intervals of ≤60 km	~2.7 MW
Total - 797 km	14		~5.7 MW

While derogations may apply for low-traffic sections, the current baseline indicates a substantial gap between existing infrastructure and AFIR requirements, particularly in relation to corridor coverage, high-power charging availability and overall network continuity. An illustrative roadmap for achieving full TEN-T network coverage is presented in the figure.



The spatial distribution of charging infrastructure is uneven but largely reflects underlying demand patterns. Public charging points are concentrated in Podgorica and along the coastal region, where the majority of the population resides and where tourism and early EV adoption have driven deployment. In contrast, northern and inland areas remain less developed, with only limited and isolated charging points.

Across all regions, infrastructure is predominantly publicly accessible and consists mainly of low-power AC chargers located in public parking areas, commercial centres, and tourism facilities. Private charging (e.g. residential or fleet-based) is assumed to cover a significant share of daily charging needs, but remains unquantified in the available data, representing an important gap in monitoring and planning.

As a result, the existing network provides basic local coverage suitable for early EV adoption but is not yet configured to support reliable inter-urban or corridor-based travel. The lack of high-power direct current



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charging along key routes remains a critical constraint, requiring users to rely on urban charging locations rather than enabling seamless long-distance mobility.

While a singular, comprehensive legal framework transposing AFIR requirements does not yet exist in Montenegro, several strategic policy documents establish the foundation for the development of AFIR.

The National Energy and Climate Plan of Montenegro²², formally adopted in December 2025, sets the overarching strategic direction for transport decarbonisation and explicitly identifies the promotion of e-mobility and alternative fuels as a key policy measure. The Plan establishes concrete deployment targets, including at least 35,000 electric passenger vehicles by 2030 and the installation of approximately 50 fast and 500 slow chargers, providing the first quantified basis for infrastructure scale-up. Along with the Sustainable Transport Action Plan for Montenegro²³ outlines measures to modernise the vehicle fleet, improve air quality and strengthen the regulatory and institutional basis for sustainable mobility and in parallel, the Medium-Term Program for the Construction, Reconstruction, Maintenance and Protection of State Roads in Montenegro until 2028²⁴, aligns with AFIR by indicating the necessity of the strategic placement of charging stations every 60 km along the Core Network. Which together have the great potential of initiatives for optimising the clear direction of the road transport development.

Achieving the 2030 AFIR targets for LDV charging, particularly along the TEN-T network and in urban areas, will require a combination of strategic planning and enabling policy measures, including the prioritisation of deployment corridors (Section 4.1), the establishment of coherent policy and planning frameworks to guide infrastructure roll-out (Section 4.2), Public support scheme for urban fast charging infrastructure (Section 5.4). Utility-Infrastructure Coordination and Grid-first (Section 5.5), Measures to ensure that publicly accessible recharging and refuelling points are accessible to older persons and persons with disabilities (Section 5.6), and National AFIR Delivery Governance and One digital single window for permitting processes (Section 5.7).

3.1. Recharging infrastructure for HDV

This section outlines the AFIR requirements for charging infrastructure for HDVs and assesses their implications for Montenegro, building on the same analytical approach as for LDVs.

Like as for LDVs, AFIR sets specific requirements for high-power charging infrastructure for HDVs along TEN-T corridors, including minimum power levels and spacing between charging hubs. These requirements are significantly higher in terms of both capacity and infrastructure complexity.

Montenegro currently has no dedicated HDV charging infrastructure, with zero public or private HDV-compatible charging points reported for 2023 and 2025, including at safe and secure parking areas. This confirms that HDV charging deployment has not yet started and remains entirely at the planning stage. Which is illustrated in Table 2.2: Targets for Electric Recharging infrastructure for heavy-duty vehicles in Appendix 1.

²² National Energy and Climate Plan of Montenegro (2025), [Nacionalni energetska i klimatski plan Crne Gore](#)

²³ Sustainable Transport Action Plan for Montenegro ([UNECE, 2024](#))

²⁴ Medium-Term Program for the Construction, Reconstruction, Maintenance and Protection of State Roads in Montenegro until 2028, [Published in 2025](#).



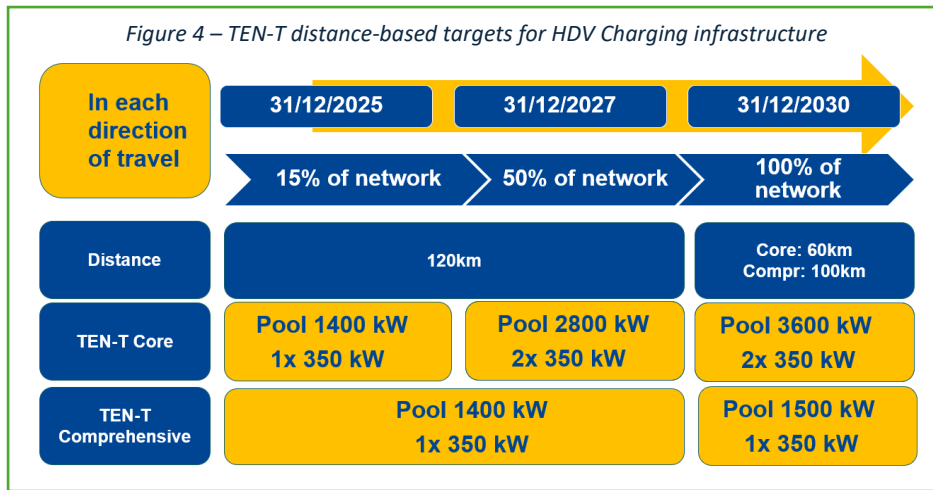
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As a result, the gap between the current baseline and AFIR requirements is structural and substantial, particularly given the scale of infrastructure needed to support high-power charging for heavy-duty transport. Based on indicative AFIR requirements, achieving compliance would require the deployment of a network of high-power charging hubs along the TEN-T network, as illustrated in the table below.

Table 3- Estimated TEN-T recharging infrastructure needs for HDV

Network	HDV hubs	Each of	Power (HDV)
Core - 279 km	5	≥3.6 MW	~18 MW
Comprehensive - 518 km	6	≥1.5 MW	~9 MW
Total - 797 km	11		27 MW

Regarding supporting national plans, the Medium-Term Programme for the Construction, Reconstruction, Maintenance and Protection of State Roads in Montenegro until 2028 contributes to AFIR alignment by identifying and developing safe and secure parking areas for freight transport, which provide a foundation for the future deployment of charging infrastructure along the road network.

Achieving the 2030 AFIR targets for HDV charging along the TEN-T network and in urban nodes will require a combination of strategic planning and substantial investment, including the prioritisation of deployment corridors (Section 4.1), the mobilisation of financing mechanisms and investor engagement (Section 4.3), and National AFIR Delivery Governance and One digital single window for permitting processes (Section 5.7).

3.2. Hydrogen infrastructure for road vehicles

This section outlines the AFIR requirements for hydrogen refuelling infrastructure and assesses their implications for Montenegro, building on the same analytical approach as for electric charging infrastructure.

Under Article 6 of AFIR, Member States are required to ensure the deployment of publicly accessible hydrogen refuelling stations along the TEN-T core network and in urban nodes by 2030, with defined spacing and minimum capacity requirements.

Montenegro currently has no hydrogen refuelling infrastructure (350 bar and 700 bar.), with zero publicly accessible or private hydrogen refuelling stations reported as of 2025 (Sheet 2: Alternative fuel infrastructure road general in appendix 1). This reflects the absence of hydrogen vehicles across all transport segments and indicates that the deployment of hydrogen infrastructure has not yet started.

Despite this, Montenegro has recently initiated key policy developments relevant to hydrogen. The Draft Green Hydrogen Development Programme with Action Plan for the Period 2026-2028 (Program razvoja zelenog vodonika sa akcionim planom za period 2026-2028²⁵ establishes the overall policy direction for hydrogen across

²⁵ [Draft Green Hydrogen Development Programme with Action Plan for the Period 2026-2028](#)



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the energy, transport and industry sectors. Within the context of AFIR implementation, the programme identifies priority actions including the preparation of a national policy framework for alternative fuels infrastructure (ongoing), the development of a dedicated Law on Alternative Fuels Infrastructure (planned for 2026–2028), and the establishment of a strategic basis for the future deployment of hydrogen refuelling stations.

In parallel, the Proposal for the Law on Cross-border Energy Infrastructure Projects, submitted to Parliament in January 2026²⁶, transposes elements of the revised TEN-E Regulation and explicitly includes hydrogen infrastructure, smart grids and related technologies enabling hydrogen use in transport. While primarily focused on cross-border and energy system integration, this framework provides important regulatory support for the future development of hydrogen infrastructure in the transport sector.

Additional national strategies and legislative instruments provide a broader enabling framework for alternative fuels and environmental policy in Montenegro. While these do not yet include specific AFIR-related technical requirements, they contribute to establishing the institutional, regulatory and financial conditions required for future infrastructure deployment.

Compared to AFIR requirements, Montenegro's current baseline represents a structural and comprehensive gap, with no infrastructure, no pilot projects, and no operational hydrogen mobility market. As a result, hydrogen refuelling infrastructure remains at an early planning stage and will require a phased approach, starting with pilot projects and targeted deployment along priority corridors.

Measures to address this gap, including the development of pilot projects, infrastructure planning, and market activation, are further outlined in Section 4.4.

3.3. Infrastructure for shore-side electricity supply in maritime ports

Montenegro has one TEN-T maritime port subject to AFIR requirements for SSE, namely the Port of Bar, with no applicable exemptions.

The same annex indicates one TEN-T port with potential relevance for LNG refuelling infrastructure, implying that future deployment may be required at the Port of Bar.

Table 4.1 in Annex 1 provides the framework for assessing SSE requirements by 2030 across vessel categories (container, Ro-Pax and passenger ships). For Montenegro, the Port of Bar is included; however, key data fields, including annual port calls and planned installations, are not completed, indicating that detailed planning and data reporting are still pending (Annex 1, Sheet 4 / Table 4.1).

This process is supported by existing national legislation, including the Law on Efficient Use of Energy²⁷, which establishes the legal basis for energy efficiency measures in final consumption, and secondary legislation on biofuels and renewable energy in transport. While not directly addressing SSE requirements, these instruments contribute to the broader regulatory and technical framework for energy use and decarbonisation in the transport sector.

Achieving compliance with AFIR requirements for shore-side electricity supply will require further development of port-level planning, technical assessments and investment frameworks, as outlined in Section 4.5.

3.4. Infrastructure for liquified methane in maritime ports

See section 3.3.

²⁶ Predlog zakona o prekograničnim energetskim infrastrukturnim projektima* [s Izvještajem sa javne rasprave](#)

²⁷ [Law on Efficient Use of Energy](#) ("Official Gazette of Montenegro", no. 57/2014, 3/2015 – corrections 25/2019, 140/2022, 84/2024)



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3.5. Infrastructure for shore-side electricity supply in inland waterway ports

Not applicable. See Appendix 1, Sheet 5: Inland ports (Montenegro has no inland waterway ports; the sheet is blank or marked “not applicable”).

3.6. Infrastructure for electricity supply to stationary aircraft

An overview of electricity supply infrastructure for stationary aircraft at Montenegro’s TEN-T airports are provided in Appendix 1, Sheet 6, including the core airport Podgorica and the comprehensive airport Tivat. The dataset includes fields for the number of contact (gate) and remote stands, as well as existing installations in 2023 and planned deployment for 2025 and 2030.

For Montenegro, the available data is largely incomplete, with most fields recorded as zero or left blank. This indicates that no significant installations of fixed electrical ground power (FEGP) or equivalent infrastructure were in place as of 2023, and that concrete deployment plans for 2025 and 2030 have not yet been defined or reported.

In relation to AFIR requirements, Article 12 establishes minimum obligations for the provision of electricity supply to stationary aircraft at TEN-T core airports, including the installation of ground power infrastructure at contact stands by 2025. The current baseline therefore suggests a substantial compliance gap, both in terms of existing infrastructure and planning readiness.

At the strategic level, Montenegro has established a broader policy framework through the National Strategy in the Field of Climate Change by 2030 and the Low-Carbon Development Strategy for Montenegro²⁸. These documents define the overall direction for decarbonisation and climate governance, including the electrification of transport and the increased use of low-carbon energy sources. While they do not contain specific provisions related to electricity supply for stationary aircraft, they provide the long-term policy context and enabling conditions for the development of such infrastructure.

Achieving compliance with AFIR requirements will require the establishment of a structured deployment approach, including infrastructure planning, regulatory alignment and integration with electricity supply strategies. Measures addressing these gaps, including requirements for ground power availability and the development of renewable electricity supply frameworks, are further outlined in Section 4.8.

²⁸ [National strategy in the field of climate change by 2030](#)



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4. Measures to ensure that targets are being met

To ensure compliance with the requirements set out in Section 3, the Government has established a coordinated framework for the development and implementation of measures supporting the deployment of AFIR to ensure compliance with AFIR requirements in Article 14(2)(c).

The Ministry of Transport has been assigned a central coordinating role and leads an inter-institutional coordination mechanism involving relevant authorities and stakeholders, including energy, maritime, aviation and other regulatory bodies.

Within this framework, a structured dialogue has been carried out between the competent authorities, resulting in a consolidated set of priority measures addressing identified deployment gaps across all relevant sectors. This work has led to the identification of 22 measures, which together form the core of the national action programme. Out of the 22 proposed measures, 17 of them are related to Road transport.

Table 4 - Overview of key measures to ensure key results

Mode	# of measures	Measures support
Road	17	<ul style="list-style-type: none"> • High priority laws on AFIR transposition, user rights, data governance • High impact permitting reforms • Competitive tenders for TEN T core coverage • Urban fast charging hubs • Comprehensive measures for HDV corridor coverage • Smart charging, building code, and demand side incentives
Maritime	3	<ul style="list-style-type: none"> • SSE regulatory mandates • Grid coordination and institutional task forces • LNG compliance pathway
Aviation	2	<ul style="list-style-type: none"> • Mandatory ground power rules fixed electrical ground power (FEGP/e GPU) • Airport electrification financing

The measures are grouped into thematic delivery packages reflecting key infrastructure segments and enabling conditions, including charging infrastructure for LDV and HDV, hydrogen deployment, maritime infrastructure, and airport electrification.

The measures are planned implemented within the current policy framework through a combination of support schemes, regulatory measures, and coordinated planning processes. Responsibility for implementation is shared across relevant authorities under the coordination of the Ministry of Transport.

Table 5 – Tailored measures for implementation categorised in packages

Measure	Delivery Measures #11	
	Road Packages	
4.2.1	LDV TEN-T Road Charging Delivery	Providing grants for the core tender, comprehensive coverage auction and a grant program for motorway service-area-
5.4.1.	LDV Urban Charging Delivery	Providing grants for urban fast charging hubs
4.3.1	HDV Charging Delivery	Supporting HDV deployment with an 15% 2025/2027 sprint program Providing grid-ready works supporting HDV infrastructure deployment
4.4.1	Hydrogen Deployment	flagship hydrogen refuelling station (HRS) and development of a HRS competitive tender
4.4.2		
	Maritime Packages	



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4.5.1	Maritime SSE Delivery	Innovation program for SSE capex support at Port of Bar
4.6.1	LNG Minimum Compliance	Designation + minimal model for LNG for maritime
Airport Package		
	Airport Ground Power Delivery	Providing mandatory FEGP/e-GPU per stand at airports
Enabling and Framework Measures #8		
Road Packages		
4.1.1	Legislative Backbone	Dedicated act adopting as national obligations for AFIR Alignment. Amend existing transport/roads and energy laws and User rights + market rules). Data governance (NAP) and alignment with EU IR data specifications. Municipal concession framework
4.1.2		
4.1.3		
4.1.4		
4.1.5		
5.7.1	Permitting & Administrative Streamlining	Clear screening thresholds to avoid over-scoping EIA for small installs while ensuring assessment for large hubs.
5.7.2	Hydrogen Safety & Permitting Framework	Standards, emergency response training, and accelerated permitting for first HRS
Maritime Packages		
4.5.2	Maritime performance	Embed SSE delivery milestones, penalties, and minimum performance in terminal concessions.
Cross-Cutting Institutional Measures #3		
Road Packages		
5.7.1	National AFIR Delivery Governance	Single national portal for permits/consents with statutory maximum decision periods.
5.5.1	Utility–Infrastructure Coordination	Grid-first coordination protocol with DSOs
Airport Package		
4.1.3	Airport Pathway	Pathway for fossil-free electricity: grid contracts and/or on-site renewables.

The Delivery Measures represent the concrete infrastructure actions required to achieve AFIR compliance across road, maritime and aviation. Each package brings together high-impact, implementation-ready investments that directly close compliance gaps and provide visible, operational improvements to Montenegro’s alternative fuels system.

The Enabling and Framework Measures provide the legal, regulatory, permitting and data-governance foundations that make delivery possible. These measures ensure a coherent national framework, reduce administrative barriers and create the conditions for efficient, scalable and investor-friendly deployment.

The Cross-Cutting Institutional Measures strengthen governance, coordination and implementation capacity across ministries, utilities, ports and airports. These packages ensure consistent planning, predictable delivery processes and the inter-agency alignment required for full AFIR compliance.

4.1. Legislative Backbone

The following measures establish the legislative backbone required to ensure full alignment with AFIR. As cross-cutting and foundational measures, they provide the legal basis for infrastructure deployment, define institutional responsibilities and set the regulatory conditions necessary for effective implementation across all transport modes. The AFIR Alignment Act is presented first, as it establishes the overarching legal framework upon which subsequent legislative measures build.

These measures contribute to the deployment of alternative fuels infrastructure in line with Articles 3, 5, 6 and 14 of AFIR, by ensuring that binding targets, institutional responsibilities and enforcement mechanisms are clearly defined at the national level.



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Measure 4.1.1 – AFIR Alignment Act (umbrella law)

This measure establishes a comprehensive legal framework to support the implementation of the AFIR in Montenegro.

Currently, Montenegro lacks a unified legal basis for the deployment of AFIR. Existing obligations, roles and procedures are fragmented across strategies, laws and secondary legislation, which creates uncertainty for investors, delays implementation and limits institutional accountability.

The measure envisages the introduction of an AFIR Alignment Act, acting as an umbrella law to:

- formally adopt AFIR targets as binding national obligations;
- designate competent authorities across transport modes and infrastructure types;
- define coordination mechanisms between national and local levels;
- establish a clear enforcement framework, including corrective measures and penalties where appropriate.

The act is expected to provide the legal basis for coherent planning, permitting, procurement and monitoring of infrastructure deployment, ensuring consistency across sectors and administrative levels.

The measure is to be implemented under the responsibility of the Government of Montenegro, with involvement of the competent ministries for transport, energy and spatial planning, and may require adoption of secondary legislation for operationalisation.

By establishing a clear and enforceable legal framework, the measure provides legal certainty for both public authorities and private investors, accelerates infrastructure deployment along TEN-T corridors and urban nodes, and strengthens Montenegro's capacity to meet AFIR requirements within the applicable timelines.

As a cross-cutting measure, it underpins all other measures in this document and ensures overall policy coherence, which explains its high ranking in terms of relevance, urgency and impact.

Measure 4.1.2 – Amendments to Transport and Energy Codes for AFIR implementation

This measure introduces targeted amendments to Montenegro's Transport and Energy Codes to operationalise AFIR requirements within the existing sectoral legal framework.

Currently, the Transport and Energy Codes do not provide a sufficiently developed legal basis for AFIR-compliant recharging and refuelling infrastructure. Key concepts, technical requirements and legal obligations are not consistently defined, creating ambiguity for regulators, municipalities and investors. This results in fragmented implementation and slows down infrastructure rollout, particularly along TEN-T corridors and in urban nodes.

The measure envisages a coordinated amendment package to both Codes, aimed at:

- defining key AFIR-aligned terms, including recharging pools, charging points and performance/output requirements;
- establishing minimum technical and operational standards for publicly accessible recharging infrastructure;
- codifying TEN-T deployment obligations, including integration with motorway service area and road infrastructure planning rules;
- formalising requirements related to interoperability, open data provision and user rights, in line with AFIR provisions.

The amendments are expected to ensure that sector-specific legislation reflects a coherent and up-to-date framework, enabling consistent interpretation and application across institutions and levels of administration.

By aligning core sector legislation with AFIR requirements, the measure reduces legal uncertainty, strengthens institutional coordination and accelerates infrastructure deployment by providing clear statutory guidance for planning, permitting and monitoring activities. The measure is to be done in the responsibility of Ministry of Transport and Ministry of Energy and Mining, in coordination with regulatory authorities, and may require the



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adoption of supporting by-laws and technical regulations. It will also allow for the aim of strengthening cooperation for the best implementation results. As part of the legislative backbone package, this measure complements the AFIR Alignment Act by translating overarching obligations into sector-specific legal provisions, thereby ensuring that all subsequent regulatory and implementation measures operate on a harmonised statutory basis.

Measure 4.1.3 – User rights and market rules for alternative fuels infrastructure

This measure establishes a clear regulatory framework for user rights and market functioning in relation to publicly accessible AFIR.

Currently, Montenegro lacks a comprehensive legal framework governing user rights, pricing transparency and market rules for alternative fuels infrastructure. The absence of harmonised rules creates uncertainty for both users and operators, limits interoperability and risks fragmented market development, which may undermine user confidence and slow infrastructure uptake.

The measure envisages the introduction of regulatory provisions that:

- establish minimum user rights, including ad hoc access without prior contracts and non-discriminatory service conditions;
- ensure price transparency, including clear display of tariffs and avoidance of unjustified price discrimination;
- define rules for payment systems, including support for widely accepted payment methods;
- set conditions for fair and open market access for infrastructure operators and mobility service providers;
- establish basic requirements for roaming and interoperability, in line with AFIR principles.

The measure is to be implemented through amendments to relevant transport, energy and consumer protection legislation, under the responsibility of Ministry of Transport, and may require supporting regulatory guidelines for consistent application. Furthermore, it will act as a part of the legislative backbone package and will complement the AFIR Alignment Act and the amendments to the Transport and Energy Codes by ensuring that the regulatory framework not only enables infrastructure deployment but also governs its effective and user-oriented operation in line with EU requirements. And have a further aim of strengthening user protection and market transparency, giving increased consumer confidence, supporting fair competition and facilitating the efficient use of the infrastructure to its optimal potential. Contribute to creating a predictable and investor-friendly market environment overall, essential for scaling up and future infrastructure deployment in the country.

Measure 4.1.4 – AFIR data governance mandate and National Access Points

This measure establishes a comprehensive legal framework for data governance across alternative fuels infrastructure, ensuring alignment with AFIR requirements on data availability, interoperability and transparency.

Currently, Montenegro lacks a unified legal framework governing data related to AFIR. There are no binding requirements on operators to provide real-time information on availability, pricing or technical characteristics, and responsibilities related to data management remain unclear. In addition, the National Access Points (NAP) does not have a clearly defined mandate, and there are no harmonised standards for data exchange or applied protocol interface. This results in fragmented and inconsistent data flows, limits interoperability and creates barriers for both users and authorities.

The measure is part of the broader Western Balkans regional roadmap for the establishment of National Access Points, coordinated under the Transport Community framework. Within this context, Montenegro's NAP development is aligned with a harmonised regional approach based on EU standards, common implementation phases and cross-border interoperability objectives.

The measure envisages the establishment of an AFIR data governance mandate, through a dedicated legal act or amendments to existing legislation, aimed at:



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- defining mandatory data provision requirements, including scope, quality standards and update frequency for all infrastructure operators;
- establishing the formal mandate of the NAP, including roles, responsibilities and data publication protocols;
- requiring the use of standardised, open and interoperable applied protocol interfaces, aligned with AFIR and relevant EU specifications;
- setting out compliance and enforcement mechanisms, including monitoring obligations and corrective measures where needed.

The measure is to be implemented under the responsibility of Ministry of Transport, in coordination with, energy and digital governance bodies, and in alignment with regional coordination mechanisms under the Transport Community and NAPCORE initiatives.

By creating a clear and enforceable data governance framework, the measure ensures the availability of consistent, high-quality and interoperable data across all charging and refuelling infrastructure. This enables transparent user information, supports seamless digital services, facilitates automated AFIR reporting and strengthens evidence-based planning and monitoring by public authorities.

As part of the legislative backbone, this measure complements the AFIR Alignment Act and related legislative measures by establishing the digital foundation required for effective infrastructure deployment and operation. It is a low-cost, high-impact measure that enables multiple delivery measures and is essential for achieving full compliance with AFIR data requirements, while ensuring interoperability with the wider regional and EU mobility data ecosystem.

Measure 4.1.5 – Municipal concession enabling framework for on-street charging.

This measure establishes a harmonised legal framework enabling municipalities to develop and operate publicly accessible on-street charging infrastructure through concession models.

Currently, municipalities in Montenegro lack a clear and consistent legal basis for procuring and operating on-street charging infrastructure through concession schemes. The absence of standardised procedures, contractual frameworks and technical requirements results in fragmented approaches across cities, administrative delays and limited investor interest. This inhibits the development of AFIR-aligned urban charging infrastructure and reduces overall market efficiency.

The measure envisages the establishment of a national municipal concession framework, aimed at:

- providing standardised concession templates, including tariff principles and risk allocation mechanisms;
- defining harmonised technical requirements for on-street AC charging infrastructure (e.g. 11–22 kW);
- ensuring alignment with interoperability, ad hoc payment and data provision requirements, consistent with AFIR and national data governance rules;
- streamlining procedures related to site allocation, rights-of-way and municipal approvals;
- ensuring consistency with Energy Performance of Buildings Directive provisions, so that public charging complements private and building-level infrastructure.

The framework is to be implemented under the responsibility of Ministry of Transport in coordination with municipalities, and may include supporting guidance, model contracts and technical standards to ensure consistent application across all urban areas.

By creating a predictable and standardised approach to on-street charging concessions, the measure reduces administrative barriers, increases investor confidence and accelerates the rollout of urban charging infrastructure. It ensures consistent national standards while allowing municipalities to play an active role in deployment.



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As part of the legislative backbone, the measure complements other legal and regulatory provisions by enabling a scalable and replicable delivery model for urban charging, which is essential for meeting AFIR targets in densely populated areas.

4.2. Recharging infrastructure for LDV

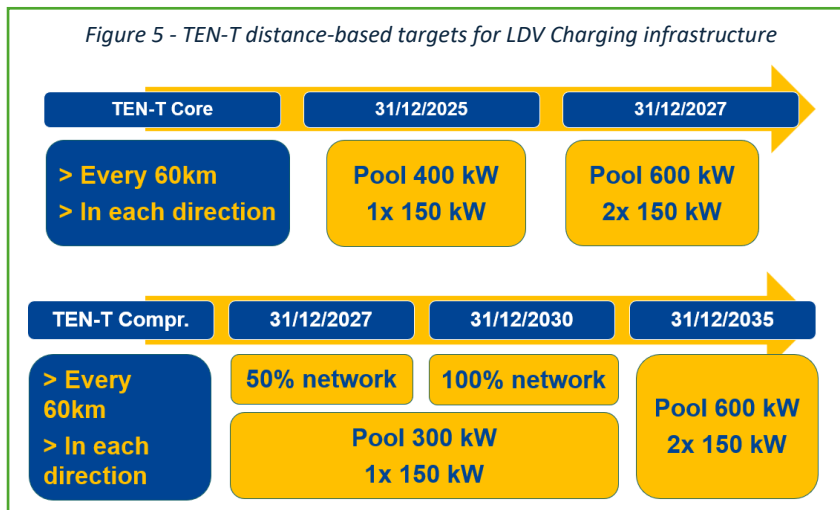
To support compliance with the requirements set out in Article 3 of AFIR, a coordinated set of measures is foreseen for the deployment of publicly accessible recharging infrastructure for light-duty vehicles along the TEN-T road network.

The overall approach consists of three complementary instruments: A competitive tender for the deployment of recharging pools along the TEN-T core network, a minimum-subsidy auction to support expansion across the comprehensive network, and concession-based obligations linked to motorway service areas. When put together, these instruments are intended to support initial compliance with AFIR requirements as well as the progressive development of the network over time. With the hope of the measures to address the TEN-T core and comprehensive networks and combine different delivery mechanisms in order to facilitate a timely, cost-effective and scalable rollout of charging infrastructure.

Measure 4.2.1 – TEN-T Charging Deployment (Core and Comprehensive Networks)

This measure contributes to supporting compliance with the requirements set out in Article 3 of AFIR, in particular with regard to overall recharging capacity and the deployment of infrastructure along the TEN-T core and comprehensive road networks.

To address identified gaps in the availability of high-power charging infrastructure, a coordinated procurement approach is foreseen covering both the TEN-T core and comprehensive networks. In line with AFIR requirements Article 3(4), publicly accessible recharging pools for LDV must be deployed in both directions of travel, with a maximum distance of 60 km between them.



The deployment is expected to be delivered through two complementary mechanisms, reflecting differences in market maturity and investment conditions across the network.

For the **TEN-T core network**, a national competitive tender is planned to support the deployment of AFIR-compliant recharging pools along the core corridor. The tender will be based on a combination of capital expenditure (CAPEX) support and output-based contracting, where bidders receive funding conditional on the verified delivery and commissioning of infrastructure. This approach reflects established European practice in structuring public-private partnerships and concession-based models for charging infrastructure deployment.

For the **TEN-T comprehensive network**, a competitive minimum-subsidy auction is envisaged for predefined locations. Under this approach, operators would compete based on the level of public support required to deliver the infrastructure.



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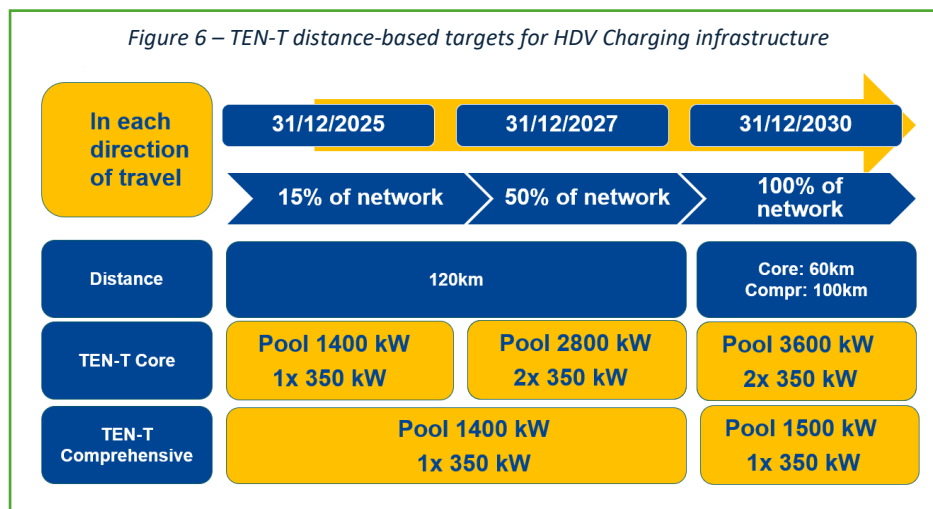
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Across both mechanisms, contracts are expected to define minimum technical and service requirements in line with AFIR provisions in Article 5, including requirements related to installed power output, number of recharging points, ad hoc payment, price transparency, minimum uptime, and the provision of data and digital interfaces. Public support is intended to be disbursed conditional upon the verified completion and operation of the infrastructure.

Taken together, the two approaches are intended to facilitate deployment along the TEN-T core network while supporting cost-efficient expansion across the comprehensive network. The measure contributes to improving national and cross-border connectivity and to supporting the development of a scalable and interoperable recharging network.

4.3. Recharging infrastructure for HDV

To support compliance with the requirements set out in Article 6 of AFIR, a targeted set of measures is foreseen for the deployment of publicly accessible recharging infrastructure for HDV along the TEN-T road network.



The overall approach consists of complementary instruments, including targeted procurement for early deployment, grid-coordination measures, and framework conditions to support market uptake. Together, these instruments are intended to initiate corridor readiness, build investor confidence and support the progressive achievement of full AFIR compliance by 2030.

Measure 4.3.1 – HDV Sprint Procurement

The measure contributes to the deployment of recharging infrastructure for HDV along the TEN-T network in line with Article 6. It also supports the enabling conditions referred to in Article 14 of AFIR.

A time-bound “HDV Sprint Procurement” package is planned to accelerate the deployment of the first high-power charging pools along priority TEN-T corridor segments in Montenegro.

The measure is intended to address the current absence of HDV-compatible charging infrastructure, as well as the lack of grid-prepared sites and a mature investment pipeline. Starting from a zero baseline, early deployment is critical to establish initial corridor coverage, build market confidence and support alignment with evolving EU freight electrification trends. While the reference milestone of 2025 is not attainable under current conditions, an accelerated rollout towards partial corridor readiness by 2027 is considered essential.

The procurement package will:

- target approximately 15% of TEN-T HDV corridor coverage as an initial deployment milestone;
- support the installation of multi-point high-power charging pools (typically 350–500 kW, with scalability towards Megawatt Charging System standards);
- integrate grid connection planning and necessary upgrades from an early stage;



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- apply competitive tendering with performance-based disbursement;
- include requirements on uptime, ad hoc access, interoperability and data provision in line with AFIR.

By delivering the first operational HDV charging sites, the measure is expected to reduce market entry risks, attract private co-investment and enable a structured scale-up towards full AFIR corridor compliance by 2030. It also supports improved conditions for the electrification of freight transport and strengthens Montenegro's integration into the emerging European HDV charging network. The measure is further designed to align, where relevant, with regional initiatives and cooperation frameworks among Western Balkan partners, supporting coordinated development of cross-border charging corridors.

4.4. hydrogen infrastructure for road vehicles

The development of hydrogen refuelling infrastructure in Montenegro is expected to follow a phased, pilot-based approach, reflecting the current absence of demand, infrastructure, and market actors. In line with the national Green Hydrogen Development Programme (2026–2028) and in particular Article 6 of AFIR on hydrogen refuelling infrastructure, initial deployment will focus on learning, regulatory preparedness and controlled scaling, rather than immediate commercial roll-out

Given Montenegro's early-stage hydrogen ecosystem, infrastructure deployment must be closely coordinated with regulatory readiness, safety frameworks and institutional capacity-building. This includes:

- establishment of clear safety and technical standards and their practical application in projects;
- training and upskilling of permitting authorities, inspectors and operators, including case-based learning and "train-the-trainers" approaches;
- development of streamlined permitting procedures, including a potential single contact point and better integration of environmental and construction processes;
- ensuring permitting readiness and predictability, enabling projects to be approved efficiently while maintaining safety and environmental compliance.

These elements are considered enabling conditions for all hydrogen infrastructure measures. They ensure that early pilot projects not only deliver infrastructure but also build the institutional and regulatory foundations required for future expansion. Against this backdrop, the following measures are designed to complement each other.

Measure 4.4.1 – flagship Hydrogen Refuelling Station

This measure establishes a first pilot HRS to create operational experience and support early hydrogen use cases. The measure contributes to the deployment of hydrogen refuelling infrastructure in line with Article 6 of AFIR, by establishing an initial refuelling point in an urban node.

A flagship HRS is planned to be deployed in Montenegro's primary urban node, with an indicative capacity of approximately 1 tonne/day and 700 bar dispensing.

The measure functions primarily as a demonstration and learning platform, supporting:

- pilot applications in public or municipal fleets (e.g. buses, service vehicles);
- testing of renewable hydrogen supply options, including small-scale electrolysis or certified imports;
- practical experience with safety procedures, permitting processes and operational standards.

The project directly contributes to building technical, institutional and regulatory capacity; and validating site selection, operational requirements and user interaction. Implementation is expected to rely on external support mechanisms (EU funding, Energy Community, OEM pilots), given limited short-term commercial viability.

Measure 4.4.2 – Competitive tender for hydrogen refuelling station



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Building on the experience gained under Measure 4.4.1, this measure introduces a controlled, market-oriented deployment model for hydrogen refuelling infrastructure. Site selection would prioritise locations in line with Article 6 requirements, such as urban nodes or sections of the TEN-T core network, where hydrogen refuelling capacity may be required at regular intervals.

A competitive tender scheme is envisaged to enable the deployment of a first publicly accessible hydrogen refuelling station, contingent on hydrogen being confirmed as part of Montenegro's long-term transport decarbonisation pathway.

Support would be provided through a structured tender process aimed at selecting a private operator responsible for the construction and operation of the station. The scheme would combine limited capital support for initial investment with time-bound operational support to ensure minimum service levels during the early stages of market development.

The tender is expected to include predefined technical and operational requirements, including compliance with safety standards, minimum uptime and defined opening hours. Site selection would prioritise locations aligned with AFIR requirements, such as urban nodes or sections of the TEN-T network.

The measure is to be implemented under the responsibility of Ministry of Energy and Mining, in coordination with relevant stakeholders in the energy and transport sectors and may be adapted depending on the evolution of hydrogen demand and policy priorities.

Compared to the flagship measure, this measure shifts from public/demo-driven deployment to market testing, which enables scalable deployment pathways while avoiding premature roll-out, ensuring that infrastructure expansion remains aligned with actual demand, regulatory maturity and investor interest. Furthermore, it validates bankable delivery and operational models under real market conditions.

4.5. Infrastructure for shore-side electricity supply in maritime ports

The Port of Bar is being positioned as a future sustainable and low-carbon port, as reflected in its strategic cooperation with EU partners and ongoing green transition initiatives (including MOU commitments). With strong support from EU funding and alignment with Montenegro's green agenda, the port is actively developing a pathway towards decarbonised operations.

This direction is consistent with Montenegro's NECP, which prioritises transport decarbonisation, electrification, and increased use of renewable energy as key levers to achieve a 55% Greenhouse Gas emission reduction by 2030 and a 50% share of renewables in final energy consumption.

Although the NECP does not explicitly regulate SSE/OPS, it strongly supports electrification of transport, grid upgrades, and renewable integration, which constitute the enabling framework for SSE deployment.

Against this background, the following measures establish a coherent and forward-looking framework for the phased deployment of SSE at the Port of Bar.

Measure 4.5.1 – CAPEX co-financing scheme for shore-side electricity

This measure establishes a targeted financial support scheme to accelerate the deployment of SSE infrastructure at the Port of Bar.

While the port does not currently meet AFIR thresholds, its planned expansion (including ro-pax, cruise and quay extensions) is expected to bring it within scope. At present, SSE is limited to small-scale applications, and a dedicated feasibility study is ongoing.

The measure introduces a state-aid compliant CAPEX co-financing scheme to reduce upfront investment barriers and enable early deployment of enabling infrastructure. Support is expected to cover:

- grid and electrical upgrades (substations, transformers, cabling);
- development of AFIR-compatible berth connection points;
- integration with quay expansion and terminal development;



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- blending of national funding with EU instruments (CEF, IPA, WBIF)²⁹ and private co-financing.

The scheme will be implemented by national authorities in coordination with the port authority, concessionaires and energy stakeholders, and aligned with the ongoing SSE feasibility study.

By de-risking early investments, the measure enables a phased and scalable rollout of SSE, aligned with traffic growth and NECP priorities on transport electrification and renewable-based energy use.

Measure 4.5.2 – Competitive Terminal concession conditions for shore-side electricity

This measure ensures that future terminal concession agreements at the Port of Bar incorporate clear obligations for the development of SSE infrastructure in line with AFIR requirements.

The measure contributes to the deployment of SSE infrastructure in line with Article 9 of AFIR, by embedding SSE delivery responsibilities into concession frameworks for relevant terminals.

This measure ensures that future terminal concession agreements at the Port of Bar include clear and enforceable SSE obligations, aligned with AFIR requirements.

Existing concession frameworks were not designed to include SSE. However, given the port’s expansion plans and its strategic positioning as a sustainable port, future concessions will integrate SSE requirements from the outset.

Concession agreements are expected to define:

- obligations to deploy SSE at relevant berths as activity increases;
- technical specifications (capacity, voltage, safety, metering);
- cost-sharing arrangements aligned with public support schemes;
- performance requirements (availability, reliability, maintenance);
- coordination with SSE feasibility studies and port-wide investment planning.

The measure is implemented by the port authority and competent national authorities in cooperation with concessionaires. By embedding SSE into concession frameworks early, the measure:

- ensures cost-efficient, market-driven deployment;
- reduces the need for ad hoc public intervention;
- strengthens the Port of Bar’s role as a modern, green regional hub.

Together with Measure 4.5.1, it establishes a bankable and investable framework for SSE deployment, consistent with Montenegro’s NECP objectives on decarbonisation, electrification and sustainable infrastructure development.

4.6. Infrastructure for liquified methane in maritime ports

This section addresses the LNG refuelling infrastructure in Montenegro’s maritime sector, in line with the requirements set out in Article 11 of AFIR concerning LNG availability in TEN-T maritime ports.

As the Port of Bar is the only TEN-T maritime port in Montenegro, it represents the sole location where these obligations must be fulfilled. Currently, no LNG bunkering infrastructure is in place. Deployment options are being assessed through an ongoing feasibility study led by the Ministry of Energy and Mining.

In this context, the approach focuses on a phased and flexible compliance pathway, ensuring timely fulfilment of AFIR requirements while aligning investments with actual market demand.

Measure 4.6.1 – LNG minimal compliance pathway for Port of Bar

²⁹ Note: CEF = Connecting Europe Facility, IPA = Instrument for Pre-accession Assistance, WBIF = Western Balkans Investment Framework



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This measure establishes a minimum, cost-efficient pathway to ensure compliance with Article 11 regarding LNG refuelling infrastructure at the Port of Bar.

It defines a phased and flexible implementation approach, combining regulatory designation with a scalable operational model aligned with demand development.

The Port of Bar is currently in the early stages of assessing LNG deployment options through an ongoing feasibility study led by the Ministry of Energy and Mining. There is no formal designation of responsibilities, no regulatory framework for LNG bunkering operations, and no defined compliance pathway. The measure envisages a two-stage minimum compliance pathway.

The first stage consists of a formal designation and regulatory framework, including:

- formal designation of the Port of Bar as the national AFIR-relevant LNG port through a governmental or ministerial decision;
- clarification of roles and responsibilities among the port authority, national authorities and market operators;
- alignment with the ongoing LNG feasibility study to ensure consistency with long-term infrastructure planning.

The second stage focuses on operational delivery through a truck-to-ship model, as a low-capex and rapidly deployable solution. This stage includes:

- establishment of safety zones, handling protocols and permitting procedures for LNG bunkering operations;
- introduction of operator licensing schemes and emergency response arrangements;
- enabling LNG supply through mobile, road-based logistics chains, avoiding the need for immediate fixed terminal infrastructure;
- coordination with future development options for LNG storage and bunkering facilities, as assessed in the feasibility study.

The measure is to be implemented under the responsibility of Ministry of Maritime Affairs, in coordination with the Port of Bar Authority, safety regulators and potential LNG service providers.

By prioritising a flexible and scalable approach, the measure enables Montenegro to meet AFIR requirements in a timely and cost-efficient manner, while avoiding premature investment in capital-intensive infrastructure. It provides an operational solution that can be deployed rapidly, while preserving the possibility to transition to fixed infrastructure should demand materialise.

4.7. Infrastructure for shore-side electricity supply in inland waterway ports

There are no inland waterway ports in Montenegro.

4.8. Infrastructure for electricity supply to stationary aircraft

Two complementary measures are planned to support the deployment of electricity supply infrastructure for stationary aircraft, addressing both the sourcing of low-carbon electricity and the availability of ground power at airport stands. Together, they establish the regulatory and operational framework required to ensure compliance with AFIR requirements and enable a transition towards low-emission airport operations.

Measure 4.8.1 – Airport Pathway, renewable electricity compliance plan

The measure contributes to the implementation of electricity supply to stationary aircraft in line with Article 12 by ensuring that the electricity used for airside operations is sourced from renewable or zero-carbon sources. It also supports the enabling conditions for infrastructure deployment referred to in Article 14 of AFIR.

A Renewable Electricity Compliance Plan is to be developed for Podgorica and Tivat airports. The plan will:

- define a clear pathway to achieving 100% renewable electricity usage by 2030;



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- specify sourcing options (Power Purchase Agreements, green tariffs, Guarantees of Origin, on-site photovoltaic);
- include annual reporting, procurement rules and verification mechanisms;
- align electricity supply planning with investments in FEGP/electric ground power units, GSE charging and grid capacity upgrades.

The measure is intended to address the absence of a structured approach to sourcing electricity for airside electrification, including fixed electrical ground power, electric ground support equipment and associated infrastructure. Without a defined framework, there is a risk that electrification measures rely on mixed or fossil-based grid electricity, reducing the overall effectiveness of AFIR implementation in terms of emission reductions.

By ensuring that airside electrification is supplied by low-emission electricity, the measure supports fossil-free airport operations and strengthens the overall effectiveness of AFIR implementation in the aviation sector.

Measure 4.8.2 – Aviation rule on ground power availability per stand (A-GPU-1)

This measure establishes a regulatory requirement to ensure the availability of electrical ground power for aircraft at all relevant stands in Montenegro’s airports.

The measure contributes to the deployment of infrastructure for electricity supply to stationary aircraft in line with Article 12 of AFIR, by ensuring that aircraft can access FEGP or equivalent solutions at each designated stand.

Currently, Montenegro’s airports do not have a unified regulatory requirement ensuring consistent availability of FEGP or e-GPU across all stands. Provision varies depending on stand type, equipment availability and operational practices, which creates uncertainty for operators and may limit the ability to ensure consistent APU-off operations in line with AFIR requirements.

The measure envisages the introduction of a binding aviation rule requiring each stand to be equipped with either FEGP or a certified electric ground power unit, supported by clearly defined technical and operational requirements.

The rule is expected to:

- ensure that all relevant stands provide reliable access to electrical ground power, enabling aircraft to switch off auxiliary power units (APUs);
- define minimum technical standards, including compatibility, capacity and safety requirements;
- establish maintenance and availability obligations to ensure continuous and reliable service;
- introduce operational procedures supporting consistent use of ground power during turnaround operations.

The measure is to be implemented under the responsibility of Ministry of Transport, in coordination with Civil Aviation Agency of Montenegro.

By providing a consistent and enforceable regulatory framework, the measure enables reliable access to clean ground power at all designated stands. This reduces fuel consumption, greenhouse gas emissions and local air pollution, while also lowering noise levels and improving operational efficiency.

As part of the airport electrification package, this measure establishes a common operational baseline across all stands, ensuring alignment with AFIR requirements and supporting a broader transition towards low-emission airport operations.



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5. Other measures to promote alternative fuels infrastructure

5.1. Measures to promote the deployment of captive fleets

The baseline includes a known 2 electric buses that were introduced by 2025. National plans (2030–2040): Montenegro has adopted an ambitious National Energy and Climate Plan (NECP), alongside a long-term spatial plan, aimed at significantly reducing greenhouse gas emissions by 2030. A key objective is the gradual phase-out of older, high-emission buses in local public transport, to be replaced with zero-emission alternatives.

5.2. Measures to facilitate the deployment of private recharging stations

Private (non-public) charging currently represents the primary charging mode in Montenegro, with most EV users relying on home or depot-based solutions. While this supports daily mobility needs, it does not contribute to publicly accessible infrastructure and limits visibility of overall charging capacity. The absence of a centralised registry and data requirements further constrains effective planning and integration of private charging into the wider system.

The revised Energy Performance of Buildings Directive (EPBD), adopted in 2024, introduces strengthened requirements for the deployment of recharging infrastructure in buildings, including provisions on pre-cabling, installation of recharging points, and smart charging capabilities in both residential and non-residential parking areas.

As part of the national implementation of the EPBD, opportunities to promote and facilitate private recharging infrastructure will be assessed, in particular in buildings and parking environments. This is expected to contribute to enabling wider deployment of private charging and supporting overall EV uptake.

5.3. Measures to promote alternative fuels infrastructure in urban nodes

Urban nodes represent key locations for accelerating the deployment of alternative fuels infrastructure, given their role as mobility hubs and demand centres. National and EU funding programmes, including the Connecting Europe Facility (CEF), are expected to place increasing emphasis on urban nodes in future funding cycles. It is therefore recommended to actively monitor and participate in these programmes, while leveraging experience exchange with other Regional Partners.

In parallel, the implementation of the revised Energy Performance of Buildings Directive (EPBD) will play an important role in enabling charging infrastructure in buildings and urban parking environments. Together, these frameworks provide a basis for strengthening the deployment of alternative fuels infrastructure in urban areas.

Measure 5.4.1. - Public support scheme for urban fast charging infrastructure

A public support scheme is planned to be implemented to accelerate the deployment of high-power publicly accessible charging infrastructure in urban nodes, with a focus on fast charging hubs for LDV.

The measure is designed to address identified market gaps in areas where commercially viable deployment remains limited, while supporting compliance with the requirements set out in Article 3 and Article 14(2)(f) concerning the availability, accessibility and adequate coverage of recharging infrastructure.

Support would be provided through targeted financial incentives aimed at reducing upfront investment costs for infrastructure operators. Priority would be given to locations with high utilisation potential, including urban centres, logistics hubs and major traffic corridors.

The measure is to be coordinated by the Ministry of Transport in cooperation with relevant authorities responsible for energy, spatial planning and infrastructure development, and will be developed through dialogue with municipalities, distribution system operators and private sector stakeholders.

The measure contributes to ensuring the availability of publicly accessible fast charging infrastructure in urban nodes and to supporting the fulfilment of AFIR requirements for LDV recharging infrastructure.



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5.4. Measures to promote the deployment of publicly accessible high-power recharging points

Are partly covered in section 5.4 above and in 4.1, 4.2 and 4.3

5.5. Measures to ensure that recharging points contribute to the flexibility of the energy system and to the penetration of renewable electricity

Measure 5.5.1 – Utility–Infrastructure Coordination and Grid-first

The measure contributes to the deployment of recharging infrastructure in line with Article 3 by addressing grid-related constraints and facilitating earlier and more predictable connection planning. It also supports the enabling conditions for infrastructure deployment referred to in Article 14 of AFIR.

A national grid-first coordination protocol between DSOs and permitting authorities is planned to be established.

The measure is intended to address identified inefficiencies in the current sequencing of grid assessments and permitting procedures, where grid-connection feasibility is often evaluated at a late stage in the project development process. In practice, this leads to delays, redesign of projects and increased uncertainty for developers. These challenges reflect broader coordination gaps between infrastructure planning and energy system operations in Montenegro.

The proposed framework will introduce a standardised process requiring DSOs to provide an early “connection feasibility statement” for proposed charging locations, including those located along the TEN-T network. The process is expected to operate within defined timelines and to be based on harmonised technical criteria for assessing available capacity, potential constraints and reinforcement needs.

The system will also support structured information exchange between DSOs and permitting authorities, reducing duplication of requests and ensuring consistent interpretation of grid-related requirements across jurisdictions. In addition, the development of indicative information on grid readiness for charging infrastructure deployment is foreseen in order to support planning and investment decisions.

By enabling earlier identification of grid constraints, the measure is expected to reduce project risk, improve investment predictability and shorten overall development timelines. It will also support the efficient deployment of high-power recharging infrastructure in line with corridor-based requirements under AFIR.

The measure complements the digitalisation of permitting procedures and broader efforts to strengthen coordination, transparency and planning across the transport and energy sectors.

5.6. Measures to ensure that publicly accessible recharging and refuelling points are accessible to older persons and persons with disabilities

Montenegro takes note of the accessibility requirements set out in AFIR and the guidelines on accessibility of electric recharging infrastructure in the EU³⁰, according to which publicly accessible recharging and refuelling infrastructure should be designed to be accessible to older persons, persons with reduced mobility and persons with disabilities.

In line with EU guidance, accessibility should in principle cover the design of hardware, the surrounding environment and user interfaces, ensuring safe and usable access for a wide range of users.

At the same time, as accessibility requirements for alternative fuels infrastructure are still evolving across EU Member States and practical implementation remains at an early stage, Montenegro will follow a monitoring and benchmarking approach. This includes observing market and regulatory developments at EU level and assessing, based on deployment progress and user needs, whether further national measures or standards are required at a later stage.

³⁰ Sustainable Transport Forum (STF), the European Commission’s expert group on alternative fuels infrastructure (2025) [Guidelines on accessibility of electric recharging infrastructure in the EU](#)



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5.7. Measures to remove obstacles regarding planning, permitting, procuring, and operating of alternative fuels infrastructure

The deployment of AFIR in Montenegro is currently constrained by administrative, regulatory and institutional barriers, including fragmented permitting processes, limited coordination between authorities and gaps in technical and operational capacity.

In line with AFIR requirements, in particular Articles 3, 6 and 14, addressing these barriers is essential to enable timely, cost-efficient and scalable infrastructure rollout. The following measures target key obstacles across the project lifecycle, including permitting, procurement and operational readiness, and aim to establish a more predictable, transparent and coordinated framework for infrastructure deployment.

Measure 5.7.1 – National AFIR Delivery Governance and One digital single window for permitting processes

The measure contributes to supporting the deployment of recharging infrastructure in line with Article 3 by reducing administrative barriers and facilitating more efficient and predictable permitting procedures. It also supports the enabling conditions for infrastructure deployment referred to in Article 14 of AFIR.

A national digital single-window for permitting procedures related to the deployment of EV charging infrastructure is planned to be established.

The measure is intended to address identified inefficiencies in current permitting processes, which involve multiple authorities, differing documentation requirements and timelines, and limited coordination between administrative steps. These challenges are consistent with broader observations of institutional fragmentation and evolving governance structures in the transport and energy sectors in Montenegro. These factors contribute to delays, uncertainty for developers and inconsistent implementation across municipalities.

The planned system will provide a single-entry point for applications and aim to consolidate key steps in the permitting process, including land-use approvals, construction permits, grid-connection initiation and other relevant administrative procedures. The platform is expected to support harmonised documentation requirements, defined decision timelines and improved coordination between responsible authorities, including the possibility for parallel processing of applications.

By improving transparency, reducing administrative burden and shortening permitting timelines, the measure is expected to facilitate a more timely and geographically balanced rollout of charging infrastructure.

The development of the system is to be accompanied by updated guidance to competent authorities in order to support consistent implementation and use of the platform. The measure also aligns with broader efforts to strengthen digital governance and data coordination within the transport sector, including the development of national access point structures.

Measure 5.7.2 – Hydrogen Safety & Permitting Framework

This measure establishes the enabling framework required to support the safe, efficient and timely deployment of hydrogen refuelling infrastructure in Montenegro.

The measure addresses current gaps in regulatory readiness, permitting capacity and technical expertise, which are identified as key barriers to the implementation of hydrogen projects. It aims to ensure that both public authorities and market actors are adequately prepared to manage hydrogen-related infrastructure in line with emerging EU requirements.

Support would be directed towards:

- the development and operationalisation of safety and technical standards for hydrogen infrastructure;
- capacity-building and training programmes for permitting authorities, inspectors and operators, including practical and case-based learning;
- the establishment of streamlined and transparent permitting procedures, including the consideration of a single contact point for project developers;
- improved coordination and integration of environmental, construction and safety approval processes.



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The measure is to be implemented under the responsibility of Ministry of Energy and Mining, in coordination with relevant stakeholders in the transport and education sectors. Activities may include cooperation with international partners and participation in regional knowledge-sharing initiatives.

By strengthening institutional capacity and regulatory preparedness, the measure reduces administrative uncertainty and project risks, thereby facilitating the implementation of Measures 4.4.1 and 4.4.2. It ensures that future hydrogen infrastructure can be deployed in a safe, predictable and scalable manner, while maintaining full compliance with applicable safety and environmental requirements.



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6. Overview of policies and national targets not covered by mandatory deployment targets under AFIR

Montenegro's NPF primarily focuses on the implementation of mandatory deployment targets and measures established under Regulation (EU) 2023/1804 (AFIR), as detailed in Sections 4 and 5.

Given the current stage of market development, infrastructure deployment and data availability, Montenegro has prioritised measures where binding AFIR obligations apply, in particular for road transport, hydrogen infrastructure, maritime SSE and aviation.

For sectors not fully covered by mandatory AFIR deployment targets — including certain aspects of maritime fuels (e.g. LNG pathways), airport infrastructure development perspectives, and alternative propulsion in rail — the current level of market maturity, demand and available data remains limited.

Therefore, Montenegro does not, at this stage, define detailed state-of-play analyses or additional measures under this section. Instead, a monitoring and assessment approach will be applied, including:

- tracking market developments and infrastructure deployment at EU level;
- benchmarking against emerging practices in other Member States;
- assessing national demand and investment needs over time.

This approach is consistent with the need to ensure proportionate and demand-driven infrastructure planning, as foreseen under AFIR.

The potential need for additional policies and measures in these areas will be reassessed in the context of:

- mandatory progress reports, and
- future updates of the NPF.



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7. Optional Elements

Montenegro's approach to AFIR deployment is currently focused on meeting mandatory AFIR requirements along the TEN-T network, as described in Sections 4 and 5.

Given the early stage of market development and the limited scale of existing infrastructure, additional national targets beyond mandatory requirements are not yet defined in detail.

7.1. Targets and measures for alternative fuels infrastructure in maritime ports for port services.

At present, Montenegro has no operational AFIR in maritime ports, including the absence of SSE and LNG bunkering facilities.

Planned development of such infrastructure is primarily driven by mandatory AFIR requirements for the TEN-T core port of Bar, and no additional national targets are set at this stage.

7.2. Targets and measures for alternative fuels infrastructure along the road networks other than TEN-T.

In accordance with Article 7(3). Deployment of AFIR outside the TEN-T network remains limited and uneven. Existing infrastructure is concentrated in urban areas and coastal regions, while large inland areas remain underserved.

7.3. Targets and measures to ensure accessibility of recharging and refuelling infrastructure in the entire territory.

The accessibility to AFIR is currently limited and geographically uneven, with gaps particularly in northern and rural regions. Improving nationwide accessibility is recognised as a medium- to long-term objective, to be addressed progressively through:

- expansion of the public charging network,
- integration with regional transport corridors,
- and alignment with future NPF updates.

7.4. Targets and measures to ensure that the density of publicly accessible alternative fuels infrastructure considers population density.

Current deployment patterns reflect initial market-driven development, with infrastructure primarily located in areas of higher population density and tourism activity (e.g. Podgorica and coastal cities).

At this stage, no formal targets are defined for infrastructure distribution based on population density. However, this aspect will be considered in future planning phases to ensure balanced and inclusive infrastructure coverage.