



ERRA E-Mobility Survey 2025 Draft Report

Georgi Shengelia
GNERC, Georgia



"The World Has Entered the Age of Electricity"

The use of electricity is growing twice as fast as overall energy demand... It is increasing its share of major sectors like road transport... through technologies such as EVs.

Fatih Birol, Executive Director, IEA

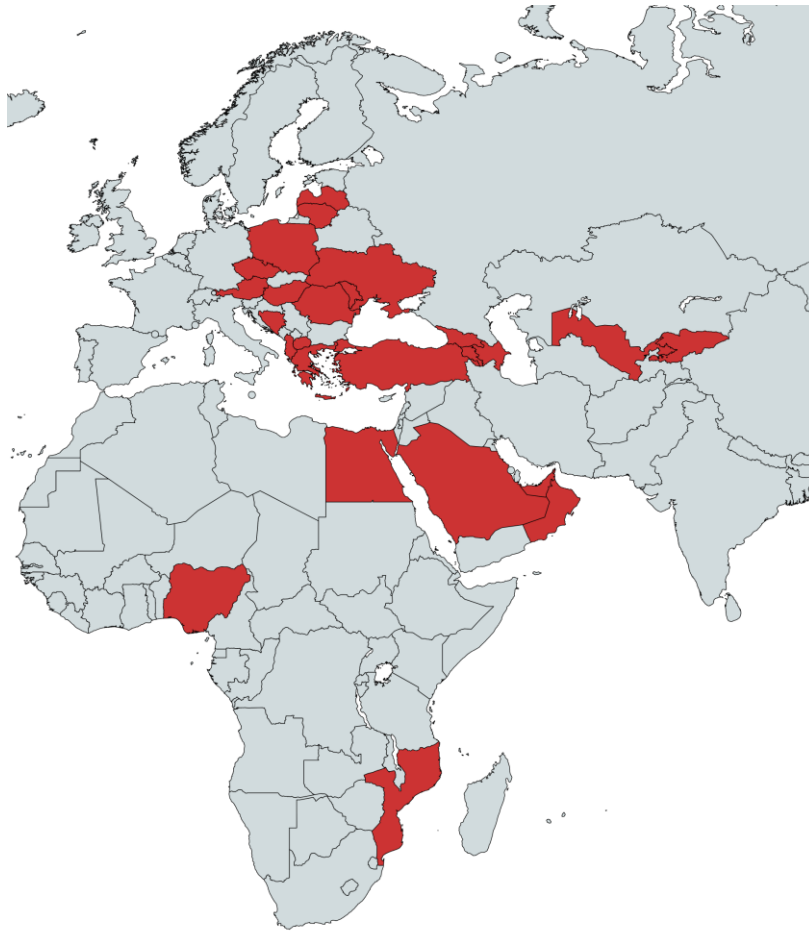


Background



- ERRA's Energy Transition Committee (ET COM) initiated the 2025 E-Mobility Survey to strengthen regional knowledge on transport electrification.
- The 2025 edition continues and expands the 2022 study, engaging 25 member regulators from the ERRA network.
- The survey examines national progress in regulatory development, infrastructure rollout, and market readiness for e-mobility.
- Data collection was conducted among national regulators in 2025 through a standardized questionnaire.

Survey Participant Countries

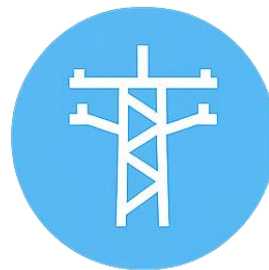
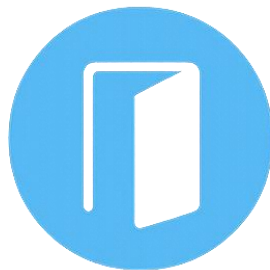


Albania
Armenia
Austria
Azerbaijan (AERA)
Bosnia and Herzegovina
(FERK)
Czechia
Egypt
Georgia
Greece
Hungary
Kyrgyz Republic
Latvia

Lithuania
Moldova
Mozambique
Nigeria
North Macedonia
Oman
Poland
Romania
Saudi Arabia
Turkiye
UAE (RSB Dubai)
Ukraine
Uzbekistan

Executive Summary: Regulatory Frameworks

- **Legal frameworks** are strengthening, even if national approaches still differ.
- **Market entry** is largely open, with some countries applying licensing or tailored models.
- **Charging prices** are mostly market-based, with limited targeted regulation.
- **DSO ownership** approaches vary, reflecting efforts to balance rollout speed and competition.
- **Fair-access rules** are expanding, with clear potential for further consolidation.



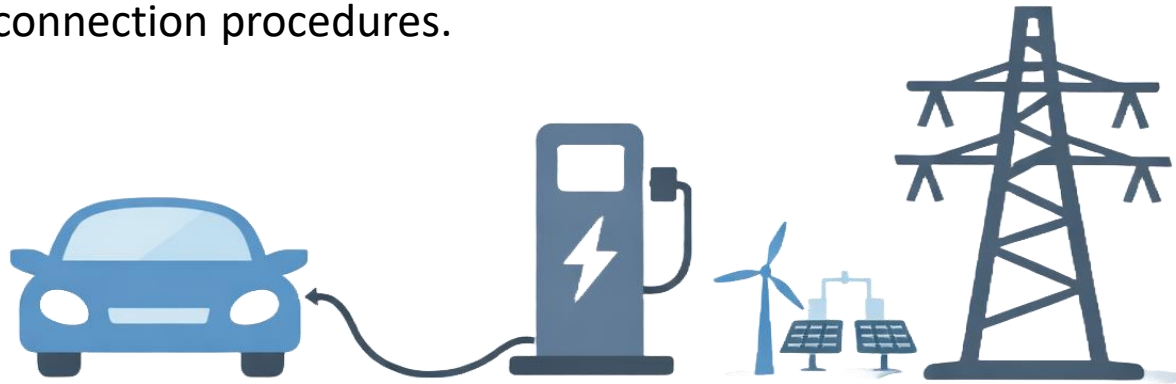
Executive Summary: Infrastructure Roll-Out



- **EV uptake** continues to rise steadily across ERRA, building a stronger base for infrastructure expansion.
- **Charging deployment** is growing with EV adoption, and compared with 2022 progress is more geographically widespread.
- **Public charging** is scaling in more advanced markets, while many countries still rely mainly on private or smaller networks in a transitional phase.
- **Roll-out** is mostly market-driven, with municipalities central in planning and DSOs largely focused on grid connection.
- **National plans** and **support schemes** remain uneven, and funding is still primarily private, with limited but emerging mixed models.

Executive Summary: Electricity System Effects

- **EV charging** is beginning to affect load patterns, creating both peak risks and flexibility potential.
- **V1G** and **V2G** remain mostly pilots or studies, with operational V2G largely absent across ERRA.
- Dedicated **EV tariffs**, **separate metering**, and **off-peak incentives** are still limited in most countries.
- **Renewable integration** and congestion-management measures are at an early stage, with reliance on standard connection procedures.



Executive Summary: Role of NRAs

- **NRA roles** in e-mobility remain limited and differ widely across countries.
- Most NRAs focus on **grid connection**, while fewer cover licensing, tariffs, or market monitoring, and many have no formal mandate.
- **Tariff-specific regulation** is rare, and charging prices are generally not regulated.
- **Cross-sector coordination** is emerging but uneven, while price transparency, consumer protection, and data collection remain underdeveloped.

Main Barriers to E-Mobility Development



- Lack of incentives for developers
- Absence of special tariffs
- Lack of specific provisions in spatial planning legislation
- Administrative burdens
- Regulatory uncertainty
- Insufficient grid capacity

Strategic Recommendations: For National Governments and Policy Makers



- **Establish clear e-mobility legal frameworks** defining roles and minimum standards for all actors.
- **Adopt national charging-infrastructure plans** aligned with EV uptake and climate objectives.
- **Apply targeted, time-bound support measures** to accelerate early deployment.
- **Clarify responsibilities** across energy, transport, planning, and telecommunications authorities.
- **Ensure interoperability, roaming, and open payment** for public charging infrastructure.
- **Integrate e-mobility** into broader energy and urban-mobility strategies.

Strategic Recommendations: For National Regulatory Authorities



- **Set clear and enforceable fair-access rules** for public charging infrastructure.
- Apply proportionate **authorization or registration** for charging operators where relevant.
- **Encourage smart and off-peak charging** through appropriate tariff and demand-response tools.
- **Strengthen data collection and market monitoring** to support regulatory decisions.
- **Improve coordination** with transport, competition, and consumer-protection authorities.
- **Restrict DSO ownership** to temporary, justified cases and support pilot projects on smart charging and V1G/V2G.
- **Promote pilots and regulatory sandboxes** for smart charging, V1G/V2G, and grid-support business models.

Strategic Recommendations: Distribution System Operators



- **Publish hosting-capacity information** and clear grid-connection procedures.



- **Ensure non-discriminatory and timely grid access** for all charging projects.



- **Integrate EV charging demand into network planning** and future load scenarios.



- **Support interoperability** through standard interfaces and fair access to grid data.

Emerging Topics: where NRAs want deeper work next



- Smart charging and Vehicle-to-Grid (V1G/V2G)
- Interoperability, roaming, and technical standards
- EV tariff design and pricing structures
- Business models and financing mechanisms
- Renewable energy integration and sustainability
- Regional and context-specific e-mobility challenges

Next Steps

Activity	Deadline	Comments
Preparation of a draft questionnaire and sending to voluntary teams for comments		Done
Receiving comments on the draft questionnaire from the voluntary team	July 11	Done
Final questionnaire available on internet and opening of survey	July 14	Done
Collecting responses to the questionnaire from the committee member states	August 18	Done
Processing and studying the collected responses	September	Done
1st draft report shared with the committee	October 3	Done
Discussing the 1st draft report with the committee (sharing comments, opinions)	October 15	Ankara
Sharing final draft with committee members	January 21, 2026	Done
Presentation on executive summary and strategic recommendations	January 29, 2026	online meeting
Comments on the final draft	February 10, 2026	
Finalization and publication (Secretariat) of the final report	February 17, 2026	
Presenting the final report at the GA 2026 meeting	April 28, 2026	Bratislava



THANK YOU FOR YOUR ATTENTION!

Georgi Shengelia
g.shengelia@gnerc.org