NEWSLETTER

E-Mobility Investment Platform
for Asia and the Pacific

July 2025

E-Mobility Support and Investment Platform updates

The E-Mobility Support and Investment Platform for Asia and the Pacific organized an online workshop on 6 May 2025 presenting regional insights and ten country briefs on e-mobility to the stakeholders in Asia and the Pacific. Segmented into three sessions, the platform team presented the regional needs and sub-regional opportunities for policy and investment pipeline development.

Key findings across the region demonstrate that electrification priorities vary by vehicle segment. However, where public transport electrification is prioritized, higher efficiency and greater public benefit can be expected. Growing EV demand must be supported by expanding charging infrastructure and greening electricity grids. Some Asian countries are advanced in policy development, however, other are still progressing. Investments are needed in grid decarbonization along with institutional readiness, including reform and human capital development.

In the Pacific Island Countries, the shift to e-mobility is gaining traction with active support from stakeholders like UNEP and the Pacific Community. Pacific Island countries face common challenges such as high costs, limited infrastructure and dependence on imported fuels. These shared barriers highlight the need for a coordinated regional approach to align policies, share knowledge, and attract investment.

South and Southeast Asian countries are at different stages of EV readiness. India, Indonesia, Malaysia, and Thailand show strong progress, while others are developing steadily. Both sub-regions require grid decarbonization and investment in renewables, particularly solar. The sub-region has several strong manufacturing bases, which must be supported throughout the EV transition. The growing number of EVs in these sub-regions demands significant investments in establishing end-of-life battery processing facilities, with some countries already beginning to make progress in this area.

In Central, West, and East Asia, countries are at very different stages of EV adoption. People's Republic of China leads the global EV market, while Mongolia is just beginning. Countries show ambition, but success depends on policy, regulatory reforms and investments in supporting infrastructure.

Overall, joint efforts between public and private sectors are necessary for the transition to align aspiration, investment and implementation. The Platform will continue to facilitate the integration of all three aspects. ADB is actively promoting the Platform and its activities and is presenting at the iEV Tech Conference and Exhibition organized by the EV Association of Thailand on 2-4 Jul 2025.

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Message from ADB

We are pleased to share that the Global Environment Facility (GEF) has approved four more years of funding for the global electric mobility project under its eighth replenishment cycle (GEF-8). The E-Mobility Support and Investment Platform for Asia and the Pacific will continue to share knowledge and build capacity on policy development and innovative financing while expanding into new areas such as mode integration, active mobility, last-mile connectivity, digitalization, and energy sector integration.

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Second-Hand EV Market

Asia and the Pacific E-mobility Platform Team

As the growth of electric vehicles (EVs) continues in Asia and the Pacific, a parallel market for second-hand EVs is beginning to take shape. The market is driven by several factors, including the increase in new EV sales, government policies and regulations, reliance on international supply-chains and consumers' affordability in sustainable transport options.

The Asia-Pacific region is projected to dominate the global EV market, holding a 58.2% share in 2025. Global electric car sales surpassed 17 million units in 2024, representing over 20% of all new car sales worldwide. Countries like People's Republic of China, Japan, Republic of Korea, and India are at the forefront, driven by strong policy frameworks, subsidies, and infrastructure investment. The EV journey in the region began more than two decades ago and has seen a steep growth since 2015. The initial ownership cycles that started over the last decade or before are generating an inventory of used EVs in the market. Manufacturers ramping up their EV production and consumers purchasing EVs in increasing shares consequently result in a growing second-hand market. The growth of this market is further supported by policies that promote the resale of EVs, including battery health certification systems and resale value guarantees. These measures aim to build consumer confidence in used EVs, which have historically suffered from concerns over battery degradation and limited resale infrastructure. Countries with strong domestic manufacturing industries are expected to see organic growth in this market. On the other hand, many countries, specifically those in the Central, West, South, and Pacific Islands, are experiencing a new second-hand EV market due to their reliance on international supply chains.

The second-hand EV market offers several benefits:

- Affordability: Lower purchase costs attract price-sensitive buyers, though battery lifespan and replacement costs remain concerns.
- Circular economy: Reusing EVs supports resource efficiency and reduces waste.
- Battery repurposing: The second-hand EV market provides earlier access to batteries for secondary uses.

However, challenges must be addressed for the market to thrive:

- Battery health and certification: Lack of standardized diagnostics reduces buyer confidence. This can be resolved using emerging solutions such as battery passports.
- Market awareness: Consumer knowledge is critical to market development.
- Policy and regulatory gaps: While some countries have introduced supportive policies, others lack clear frameworks for resale, import, and certification.

With the right mix of policy support, infrastructure development, and consumer awareness, the second-hand EV market can become a vital component of the e-mobility ecosystem. As more EVs enter the market and battery technologies improve, the resale sector will likely play a crucial role in democratizing access to clean mobility across diverse economic and geographic contexts.

Asia EV Outlook: Kazakhstan

Sudhir Gota and Alvin Mejia, Asia Transport Observatory (ATO)

The Asian Transport Outlook (ATO) project-supported by the Asian Development Bank and the Asian Infrastructure Investment Bank – together with the Urban Electric Mobility Initiative (UEMI) and the EU-supported SOLUTIONSplus project, are producing e-mobility profiles that focus on taking stock of the main developments relating to e-mobility transition in Asian economies. This edition of the newsletter presents the profile for Kazakhstan

Kazakhstan is rapidly advancing its electric mobility sector. Between March 2022 and March 2023, electric vehicle (EV) numbers tripled, from 631 to 1,900 – according to the Ministry of Internal Affairs.

The automotive industry, a national priority, began in 2003 and expanded to EV production in 2014 with the rollout of 15 electric buses. By 2020, Kazakhstan operated 230 electric buses, including 100 by Yutong from the People's Republic of China. The local firm Saryarka AvtoProm has produced 140 EVs since its opening in 2016 and now assembles models like the JAC iEV7S and Kia EV6. Additional EV production currently takes place is underway in Saran, Almaty, and Kostanai.

Charging infrastructure is also expanding, with 109 public stations installed across Astana, Almaty, and Schuchink. While the increase in charging infrastructure is promising, the scale is still relatively modest compared to the growing number of EVs. To provide perspective, this equates to roughly one public charging station per 17 EVs, which may be sufficient at current adoption levels but will need rapid scaling to support future growth.

However, the environmental benefits of the EV uptake are limited by Kazakhstan's fossil fuel-dominant grid which accounts for 84% of electricity generation, with a grid emission factor of 656 $kgCO_2/MWh$. As such, grid decarbonization is critical to maximizing the impact of EVs. Therefore, while investment in EV infrastructure is a positive step, the broader energy transition remains crucial.

Detailed report can be found here

Webinar Series

E-mobility Support and Investment Platform for Asia & Pacific

The Asia and the Pacific e-mobility platform delivered six interesting webinars between August and November 2024. The key outcomes of those webinars were:

20 Nov 2024

Click to view recording.

Pathways to a Transformative and Just Transition for Public Transport in the Philippines

Jericho Jan Andres and Joyce Rivera, GIZ Philippines and Pacific Island Countries

Maria Golda Hilario, Director for Urban Development, Institute of Climate and Sustainable Cities

A systems and adaptive approach, collaboration, knowledge exchange and investments in management systems are crucial in enabling the transformation into a low-carbon public transport ecosystem.

04 Dec 2024

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Gender-Inclusive Electric Bus Operations: The Case of La Rolita in Bogotá, Colombia

Javier Márquez Ramón, Acting General Manager/ Administrative and Financial Manager, La Rolita

Demystifying traditional gender-related beliefs allow the adoption of new approaches that facilitate cost savings, increased road safety, user satisfaction and CO2 emissions reduction.

22 Jan 2025

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Accessibility as a Tool for Monitoring Electric Vehicle Deployment

Emily Moylan, Senior Lecturer in Transport, University of Sydney

Understanding behavior and implementability of policies that support EV deployment is imperative in illustrating the interactions between battery range, public charging infrastructure and home charging.

05 Feb 2025

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Geofencing for Urban Mobility: Advancing Safety, Sustainability and Connectivity

Mubeen Ahmad, Principal, Emnay Design International and Lecturer/Research Fellow, University of Queensland

Geofencing technology drives urban transformation by promoting emissions-free zones, pedestrian and rider safety in high-traffic areas, decongestion and enhanced first- and last-mile connectivity.

05 Mar 2025

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Advancing E-Mobility in Ports: Electrification and Alternative Fuels for Maritime Decarbonization

Justin Cross, Port Strategy, Planning and Development Consultant, Royal HaskoningDHV

A decarbonization strategy starts with management buy-in and having the right policies in place; having a clear vision with a well-developed roadmap is key to successful delivery.

06 Nov 2024

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Electrifying Road Freight Transport: The Case from People's Republic of China

Qiuyang Lu, Senior Transportation Engineer, Institute for Transportation and Development Policy (ITDP)

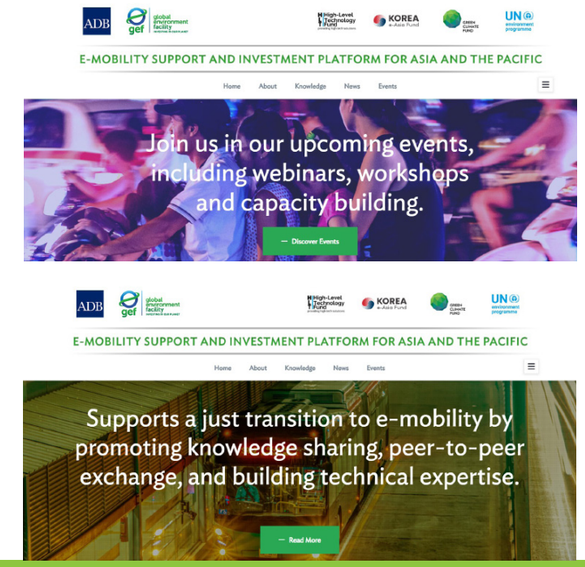
Decarbonizing road freight faces challenges like diverse user scenarios, inadequate infrastructure, and the prevalence of small operators; China's freight transport decarbonization strategies include subsidies for clean energy vehicles, infrastructure improvements, and balancing transport modes.

Website Launch

E-mobility Support and Investment Platform for Asia & Pacific

The E-Mobility Support and Investment Platform now has a website, available at emobilityplatform.asia. The website includes the platform's upcoming events, news, blogs and knowledge products, such as webinar recordings, e-mobility country profiles produced by the Asian Transport Observatory and newsletters.

If you wish to collaborate through e.g. a blog post for the website, please contact the platform team.



Online Training Workshops

The E-Mobility Support and Investment Platform for Asia and the Pacific delivered four training workshops on relevant topics relating to the scale-up of e-mobility in the region. The key outcomes of those sessions were: The key outcomes of those sessions were:

20 May 2025

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Battery Electric Bus Business Models

Avinash Dubedi and Chintan Daftardar - Program Head, WRI India

India's e-bus transition is supported by flexible business models, with the Gross Cost Contract model widely used to balance risk and delivery. Aggregated procurement, standardization, and blended financing are helping reduce costs and scale deployment sustainably.

22 May 2025

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E-Mobility Project Financing

Koen Van Baekel, Advisor, Rebel Group; Co-founder, Zeroca

E-mobility financing involves managing risk from upfront investment and delayed returns, supported by tools like green bonds and carbon credits. Strong financial models are key, while grid carbon intensity mainly affects operating costs, not financing decisions.

27 May 2025

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E-Mobility Roadmap Development

Rahul Bagdia, Chairman & Managing Director, pManifold

National e-mobility roadmaps can be developed quickly with early stakeholder engagement and clear roles. Successful strategies target high-use vehicle segments, combine incentives with infrastructure, and must be locally tailored, with public sector ownership and sustainable funding mechanisms.

28 May 2025

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The Future of Electric Vessels

Raffael Held, Project Director, GIZ, Marshall Islands

Henrik Richter-Alten (Naval Architect) and Jonas Schwarz (Research Associate) University of Applied Sciences Emden/Leer

The Marshall Islands is advancing low-carbon shipping with solar-electric vessels, cutting fuel costs by up to 80%. Community-led boat building, formal training, and off-grid charging make the approach ideal for remote island transport.

ADB Administered GEF-7 Pilots Pave Way for Driving Sustainable Mobility in India

Asia and the Pacific E-mobility Platform Team

The Asian Development Bank (ADB) is administering a project funded by the Global Environment Facility (GEF) that aims to test and demonstrate innovative, inclusive, and scalable solutions that can support a transition to low-carbon transport. The project is executed by Energy Efficiency Services Ltd. (EESL) and its subsidiary Convergence Energy Services Limited (CESL), is the implementing partner. The project aims to pilot integrating renewable energy with electric vehicle (EV) charging infrastructure and promoting e-micromobility solutions for women entrepreneurs in rural India, as well as building capacity of city governments for e-mobility planning.

One of the flagship initiatives is the installation of a solar-powered EV charging station at a major tourist destination, the Statue of Unity at Kevadia, Gujarat. This off-grid solar carport integrates a 50 kWh rooftop solar array with a 200 kWh battery storage system and is capable of charging up to 12 EVs at a time, servicing the vehicles used by officials working at the statue. Since its commissioning in October 2024, the station has generated more than 12,000 kWh of clean energy, with around 35% used for EV charging, resulting in the avoidance of over 10 tons of CO_2 emissions. The project demonstrates how clean energy solutions can be integrated with e-mobility to reduce carbon footprints in remote or urban areas. While solar carports remain relatively costly, their long-term potential is promising as battery prices decline and energy storage technologies mature.

In rural areas, the Sustainable Transport for Rural Entrepreneurs through Electric Bicycles (STREE) initiative is transforming mobility for women. Through bulk procurement and distribution of 1,800 cargo e-bicycles across four Indian states, CESL achieved a 40% cost reduction over prevailing market prices. Women from self-help groups have received training in basic maintenance and financial literacy, enabling them to use the bicycles for delivering goods, accessing markets, and supporting livelihoods. Participants have reported enhanced mobility, reduced physical strain, increased income, and greater independence. Encouraged by the results, CESL estimates a potential demand of 100,000 e-bicycles over the next four years.

Finally, the project is also supporting the preparation of EV infrastructure plans for five cities across India. These plans have already been prepared for the cities of Varanasi and Shimla, covering demand projection for EVs up to 2035 and associated infrastructure needed including potential sites for deploying public charging stations. As part of these processes, high-level workshops were arranged, bringing together urban municipalities, state transport departments, and private sector players. Additionally, as part of this strategic planning, business models have been developed to promote diverse segments of the EV value chain. These include models for battery swapping, EV charging as a service, solar carports, electric bicycles, and vehicle retrofitting.

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