NEWSLETTER

E-Mobility Investment Platform
for Asia and the Pacific

November 2023

Welcome to E-mobility Support and Investment Platform

On Friday, 8 September 2023, ADB launched an e-mobility community, financed by the Global Environment Facility (GEF), for ADB staff, key DMC counterparts, and international partner organizations, including UN agencies, Urban Electric Mobility Initiative, Clean Air Asia, among others. The vision of the platform is to become a centre of knowledge in the region to support a just transition towards net-zero pathways.

The platform will bring together representatives from the Developing Member Countries (DMCs) of the Asian Development Bank working toward EV adoption in their countries, as well as private sectors, industry experts, and development partners in the region. The platform will build the capacity to promote dialogue, knowledge exchange, and mutual learning. It will facilitate peer-to-peer networks through regular engagements. The scope of the platform covers the entire value chain of electric vehicles.

Welcome to the first newsletter of the platform. The newsletter will be a rich source of information about what is happening in the EV sphere in the region. This quarterly newsletter will include technical articles, showcase ongoing EV initiatives in the region, inform the state of play of EVs in specific countries and provide updates on regional activities. Be part of the news and contribute to our newsletter. Please contact the Platform Team for your contribution.

BE PART OF THE PLATFORM
by filling this survey form

Message from ADB

We, together with platform partners, are pleased to launch this newsletter of the E-Mobility Support and Investment Platform for Asia and the Pacific at our first flagship event in Seoul on 14-16 November 2023. As we build a community of e-mobility practitioners in the region, we hope that the newsletter evolves into a key source of insights on e-mobility developments in the region.

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Republic of Korea's Government's Green ODA Policy and Green Mobility

Sunjin Park, KOICA (Korea International Cooperation Agency)

As a government agency responsible for Republic of Korea's grant ODA, KOICA has been focusing on tackling global climate change as one of its priorities and thus it is our delight to co-organize e-mobility workshop with ADB in Seoul on 14-16 November 2023.

The government of Republic of Korea has revised its NDC target to reduce national greenhouse gas emissions by 40% by the year 2030, compared to that of in 2018. The Republic of Korea's government is also actively expanding its green ODA volume as to contribute to the achievement of the NDCs of the developing countries, aiming to reach the average volume of the other OECD DAC member countries by 2025.

It is our belief that one of the comparative advantages of Republic of Korea's green sector is the EV (Electronic Vehicles), including the battery industry. As of May 2023, the number of the electric vehicles registered in Republic of Korea was 450,000, accounting almost 1.8% of the total. I believe the Seoul workshop will be a meaningful occasion to share Republic of Korea's experience and lessons learned in expanding the EV.

KOICA and Green Mobility Projects

In response to the government's policy mentioned earlier, the budget of KOICA has been significantly increased accordingly, to about 10 billion USD in 2023. The large portion of its budget has been allocated to green ODA projects, including green mobility projects in countries like the Philippines and Morocco.

As the result of the budget increase, we are facing the dramatic influx of the new green project proposals, and thus it is crucial for us to plan, design and deliver new projects properly. Moreover, in cases of the EV, not only the supply of the vehicles per se but also the laws and regulations supporting it, base infrastructures like charging facilities, and public awareness improvement should move in a comprehensive manner.

Asia EV Outlook: Bangladesh

Sudhir Gota and Alvin Mejia, Asia Transport Outlook (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 profiles for Bangladesh.

Currently, there are no official statistics on how many electric vehicles are running on the ground in Bangladesh. However, the Government deems that the electric fleet is dominated by electric bikes, electric rickshaws, and hybrid vehicles. E-rickshaws have become a staple on the road. In 2010, a local company started retrofitting rickshaws with imported kits from People's Republic of China. Later, larger electric 3-wheelers, locally dubbed "easy bikes", gained popularity. Open data sources suggest that there are only a handful of charging stations available in the country, primarily found in the capital, Dhaka.

The rising costs of road fuels, the country's high dependency on imported energy, and the Government's thrust to reduce the externalities from transportation have been propelling the interest towards electric mobility. Several policy changes have taken place to accelerate EV adoption in Bangladesh. It includes lower taxation for electric vehicles compared to conventional and hybrid vehicles. The Automobile Industry Development Policy 2021 sets a target for a major transition towards electric vehicles by 2030. Subsequently, the Government approved an Electric Vehicle registration and operation policy in April 2023, targeting to convert at least 30% of vehicles to electric by 2030. An EV charging guideline has also been issued in July 2022.

Further details of the report can be found here.

EV News

Changing Nepal's Electric Future

In Nepal, ADB supports the Nepal Electricity Authority in setting up and maintaining a minimum of 50 electric vehicle (EV) charging stations nationwide. This forms part of an initiative that aims to enhance Nepal's power supply and distribution systems, as the convergence of new technology in transportation and power sectors is considered important. For more information, watch the video of the initiative.

Developing Innovative Transport Systems for New Cities

ADB's technical support for the Xiong'an New Area in the People's Republic of China (PRC) included the recommendation to accelerate the uptake of clean energy vehicles. A minimum adoption share of zero emissions vehicles in high-potential market segments, such as airports, public transport and logistics, was suggested. Piloting zero emission autonomous vehicles was recommended for gaining understanding of the design and logistics considerations to future-proof the area's infrastructure. Read more in ADB Brief: Developing Innovative Transport Systems for New Cities.

Electric Buses Reduce Air Pollution in Bishkek

The ADB-supported Urban Transport Electrification Project will finance the purchase of 120 battery-electric buses in Bishkek, Kyrgyz Republic. The Urban Transport Electrification Project will help improve air quality, enhance energy security, and address traffic congestion. The project will also upgrade the infrastructure of two trolleybus depots and establish a 3.5-kilometer green mobility pilot corridor to increase bus speed and improve service reliability of public transport in Bishkek city center. For more information, watch the video of the initiative here.

Total Cost of Ownership (TCO) and Grid Integration Tool

Despite the high upfront cost, the operating and maintenance costs of EVs, in the long run, can make EVs more cost-effective. The cost of owning and running an EV is an effective way to indicate how EVs are more or less affordable compared to ICEs.

The International Energy Agency (IEA), with financial support from GEF, developed an interactive tool to calculate TCOs of EVs. It combines different cost components, including purchase costs, running costs such as fuelling/charging and maintenance, and financing. The online tool (Electric Vehicles: Total Cost of Ownership Tool – Data Tools - IEA) is developed for five countries, including India and Indonesia. The tool uses annual driving distance, vehicle type, fuel powertrain, fuel price, and the cost of home charging. The tool can show how the cost profile would change over the vehicle's lifecycle and how different parameters can impact the cost difference between EVs and ICEs. The tool also provides a breakdown of costs by different components, allowing the users to gain an understanding of the most significant contributors to TCO.

IEA, with support from GEF, also developed another tool for quantifying and visualising the EV charging demand profile for different vehicle classes and charging use cases. The tool outputs are useful for a comparative analysis of typical transformer capacities or with typical time periods of peak loads. The Grid Integration Tool estimates the implications of the charging load profiles based on the expected electric mobility uptake. The Asia and the Pacific e-mobility platform delivered online workshops in October 2023 to introduce both the TCO and the Grid Integration tools.

Upcoming Activities

29th November 2023
Green financing for electric vehicles
Speaker: Ozlem Kildir

An introduction to climate-labelled loan structures and other financial modalities with insight from Central.

6th December 2023 – Electric vehicle roadmap development
Speaker: Stuart Clapham

Exploring the pathways required to bring electric vehicles into the market.

14th - 16th of November 2023
Main Workshop
The main workshop will be held in Seoul, Republic of Korea. The workshop will be the platform's primary opportunity for face-to-face engagement and relationship building. Representatives across public, private, multilateral and expert organizations will attend the workshop.

Platform webinar updates

The Asia and the Pacific e-mobility platform has delivered four interesting webinars until early November since its inception. The webinars were well attended by the e-mobility community members. They key outcomes of those webinars were:

Session: Introduction to e-mobility
20th September 2023
Speaker: Conrad Richardson

- Electrification should be combined with Avoid-Shift-Improve framework.
- A 'dirty' grid is not an excuse to postpone e-mobility adoption – we can decarbonise the energy system and transport simultaneously.
- Significant investment is needed to scale up the end-of-life management of batteries.

Session: E-mobility policy framework
4th October 2023
Speaker: Moshiuzzaman Mahmud

- Electric Vehicle policy needs to be forward looking and ambitious, yet practical.
- Policy needs to be inclusive and economically viable. Wide stakeholder buy-in is required across both the public and private sector.
- Institutional readiness is key to own and implement successful policy.

Session: Barriers to EV adoption and finding solutions
18th October 2023
Speaker: Jose Bienvenido Biona

- Barriers to EV adoption varied by market and vehicle types.
- It is vital that the relevant institutions have the capacity to act and collaborate to put effective solutions in place.
- The strategies should be balanced and nuanced, to ensure genuine concerns are acknowledged.

ENTREV Project: Indonesia

Eko Adij Buwono and Yovi Rahmawati, ENTREV Project Management

The Indonesian Government has a development plan to promote the use of electric vehicles (EVs) in the country. The state-owned electricity enterprise, PLN, has developed a roadmap for EV adoption.

As per current regulations, all electricity supply for EV charging stations in Indonesia will be provided by PLN. The roadmap projects a significant growth of EVs in the country. According to PLN's projection, the number of electric four-wheelers is expected to increase from 22.5 thousand in 2022 to approximately 2 million by 2030, while the number of two-wheelers will increase from 68.5 thousand in 2022 to around 13.5 million by 2030. However, this growth will require adequate charging infrastructure. The roadmap estimates a need for around 48 thousand charging infrastructure for four-wheelers and approximately 196 thousand for two-wheelers by 2030. Nonetheless, the actual sales of EVs to date have been lower than expected, mainly due to the lack of charging infrastructure and the high cost of EV ownership.

The project titled "Enhancing Readiness for the Transition to Electric Vehicles in Indonesia" (ENTREV) is a four-year initiative funded by the GEF Trust Fund. The project commenced in February 2023, and it is expected to be completed by early 2027. The total budget allocated for this project is USD $1,816,500. The Ministry of Energy and Mineral Resources (MEMR) represents the implementing partners from the Government of Indonesia.

The objective of the project is to decrease greenhouse gas emissions resulting from urban transportation, enhance air quality, reduce petroleum product consumption, promote local manufacturing facilities, and generate new job opportunities. The success of the project can be assessed by the rise in the usage of battery-electric vehicles in urban regions.

The project will implement specific interventions throughout the program. They are:

- Develop the market for the production of EV components
- Development of EV charging and battery swapping stations
- Promotion of purchase and use of battery electric vehicles
- Capacity, knowledge, and information development

The project is focusing on deploying electric vehicles infrastructure in three pilot regions – Jakarta, West Java, and Bali. Each region has a specific target for the number of EV infrastructure deployments. In Jakarta, the project aims to implement at least 12 battery swapping stations for two-wheelers and one EV charging station for four-wheelers. In West Java, there will be at least five battery swapping stations and seven charging stations. In Bali, 12 battery swapping stations and one EV charging station will be implemented. Overall, the project plans to install around 29 battery swapping stations and 9 EV charging stations across these three regions.

The project has a result-oriented approach, and it is expected to achieve three primary outcomes:

BATTERY PRODUCTION

Battery electric vehicle production and the deployment of charging infrastructure would be strengthened in a way that efficiently responds to the national market.

MARKETS & POLICIES DEVELOPED

The local policies and markets would be effectively developed by strengthening the market for battery electric vehicles and charging infrastructure in selected regions in Indonesia.

DEVELOP TECHNICAL SKILLS

The necessary capacity and technical skills would be developed amongst the public sector officials, vehicle manufacturers, civil society (potential EV buyers), and other associated value chains.

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