


E-MOBILITY FOR GREEN URBAN TRANSPORT | 8-9 SEPTEMBER 2022

The ASEAN Catalytic Green Finance Facility (ACGF) Innovative Finance Clinics, developed by the Southeast Asia Green Finance Hub in close collaboration with other ADB departments, ACGF partners, and ASEAN governments, aim to originate green and climate-resilient projects in ASEAN that mobilize private, institutional, and commercial capital. The Clinics bring together government officials, experts, financiers, and other stakeholders to identify and enhance capacity for bankable project opportunities.

This Clinic provided technical training on e-mobility models for planning, procurement, structuring, and financing for green urban transport projects. Participants delved into case studies showcasing global best practices and innovative finance approaches to adopt and scale up e-mobility. Discussions also focused on the design or upgrade of public transport systems to effectively address the challenges posed by climate impacts.



CLINIC BY THE NUMBERS



93 participants (31% women) from 12 countries; 46 ASEAN government officials (28% women) from 8 ASEAN countries.

Organizations: National and city governments, ministries of transport and finance, state-owned enterprises, private sector, financing institutions, and transport experts.

Countries: Cambodia, India, Indonesia, Lao People's Democratic Republic, Malaysia, Nepal, Pakistan, Philippines, Singapore, Republic of South Korea, Thailand, and Viet Nam.

20 presentations from public and private sector experts, covering:



Topics: e-mobility sector overview; investment opportunities and enabling factors for electric vehicle (EV) deployment; green financing options; private sector perspectives; public policy and planning.



Case studies: Policy, planning, and private sector examples from Republic of Korea, Thailand, and Singapore; deploying EV bus fleets in Chile, People's Republic of China, India, and micro-bus fleets in Nepal; e-mobility for first and last mile connectivity including three wheelers in Pakistan, Visakhapatnam, and Delhi; e-ferries in Thailand.

LEVERAGING PARTNERSHIPS



WHY IS E-MOBILITY FOR GREEN URBAN TRANSPORT IMPORTANT FOR ASEAN?

Transportation ranks as the second-largest contributor to global CO₂ emissions, comprising 23% of energy-related greenhouse gas (GHG) emissions worldwide and 18% of total man-made emissions. In ASEAN, the number of transport vehicles is forecasted to more than double from 2017 levels, reaching 591 million vehicles by 2040.

Furthermore, cities play a pivotal role in Southeast Asia's sustainable development. Currently, about 45% of the region's population lives in urban areas, and by 2030, an additional 58 million people are expected to relocate to cities, increasing the urban population to 56%. This surge, combined with sprawling urban development, inadequate transportation infrastructure, and increased car ownership due to increasing incomes, will exacerbate traffic congestion, air pollution, and greenhouse gas emissions of regional cities.

Therefore, efficient urban public transport systems are critical for economic and social development. Electric mobility offers a clean disruption opportunity for Southeast Asia to relieve the pressure on cities and mitigate GHG emissions.

“We need to decouple growth from carbon emissions. If we can’t do this in this region, we will fail on our global tasks, and we can’t achieve Paris Agreement goals.”

Tom Moody

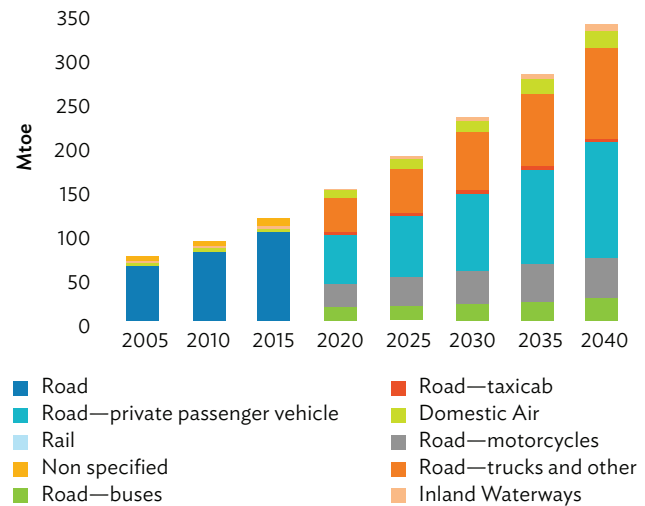
Regional Director Southeast Asia, Climate and Energy for the
UK Foreign, Commonwealth & Development Office
British High Commission, Singapore

“Transition from something doesn’t have a shortcut pathway. We need driving force from both international and national agents that comes in the form of time, money, cooperation and will.”

Chutinthorn Mankhong

Chief of Sustainable Transport Promotion Group
Office of Transport and Traffic Policy and Planning
Ministry of Transport, Thailand

EMISSION PROJECTION IN ASEAN BY TRANSPORT MODE



Source: ASEAN Centre for Energy.

SELECTED BUSINESS AND FINANCING MODELS

A majority of Nationally Determined Contributions (NDCs) of Southeast Asian countries have identified transport as an immediate mitigation priority. Barriers such as high upfront investment costs and infrastructure and implementation challenges must be overcome to fulfill these commitments. Solutions to defray high upfront costs and de-risk or best allocate risks among stakeholders include:

- Implementing revenue and capital expenditure (CAPEX) incentives and innovative structures such as unbundling or disaggregating asset ownership from operations.
- Adopting demand aggregation or bulk procurement strategies by consolidating the requirements from various transit agencies and standardizing specifications for e-vehicles and charging infrastructure. This approach simplifies procurement processes and achieves economies of scale.
- Establishing national or pooled financing vehicles to facilitate an integrated, cross-sector approach to project preparation and financing. This allows for portfolio risk-based pricing as opposed to project risk financing and provides access to global private capital flows.

KEY TAKEAWAYS

1. There is strong demand for e-mobility pilots and large-scale projects in all ASEAN countries. E-mobility paves the way for decarbonization across Southeast Asia, connecting communities to a low-carbon future.
2. Scaling up e-mobility across the region requires concerted strategic planning across multiple levels of government and the private sector. This includes EV manufacturing policies, the construction of charging infrastructure, the provision of mobility services, the mix of energy supply, and engagement with financial institutions.
3. Substantial public financing is essential for the development of EV systems and infrastructure, while mobilizing private investment is crucial for the deployment and operation of fleets.

CLINIC OUTCOMES

- There were six requests for ACGF technical assistance to develop early-stage concepts and projects. Five ASEAN countries requested funding to support upstream planning for EV development and deployment in several cities and to model a public-private partnership (PPP) structure for e-bus deployment.
- Following requests from Clinic participants for deeper engagement with entities and cities that have successfully implemented green urban transport systems, Twinning programs between the Korea Transport Authority (KOTI) and various cities in Thailand and the Philippines were launched in 2024.