ASIA AND THE PACIFIC TRANSPORT FORUM 2024

14 - 17 May 2024 | ADB Headquarters, Manila Philippines



Snapshots and Insights : E-mobility in Asia & the Pacific – Trends and Actions

0

Alvin Mejia Program Manager Asian Transport Outlook



ATO National and Urban Database Indicators





- 51 Economies (ADB Members + Russia and Iran)
- 460 Urban Centers (412 Asia-Pacific, 48 International)
- **46** Urban Centers with a detailed review

410 national indicators,

53% have multi-year data,45% have 2022 data ,10% have more than 2 sources,30% have more than 1 source,

281 urban indicators,

~80% have multi-year data, ~70% have more than 1 source

EV Sales % as Strong or Stronger in Asia Compared to Other Regions



Still a Long Way Towards Transition Across the Globe



EV Stock and Sales



Asia is Driving the Volume of Transition



- 60% of the additional electric cars from 2015- 2023 have been added in Asia
- >90% of the additional e-buses between 2015-2023 have been added in Asia

Asia's Importance in Achieving 1.5 Degrees



E-mobility Measures : Expanding and Diversifying



E-mobility Measures : Keywords Evolution

2006-2015

Warranty support for manufacturers Research and development - EV and components Purchase incentives for EVs and components Import duties reduction for EVs and components Finance for research, development and promotion of RE Mandated EV % target in fleet EV performance standards Direct sourcing of power from RE power suppliers General EV industry plan Charging systems standards(general) General pronouncement - efficiency transport vehicles Standards - general EV-specific cash-for-clunker scheme Pronounced investments on Evs Demonstrations - charging technologies Charging connector and cable standards General pronouncement of support for charging infrastructure Test specifications - Batteries EV Modal targets

Test specifications - Evs Renewable energy targets

Public fleet electrification target EV safety standards EV controller standards General pronouncement of support for EV usage Guidelines - classification and registration of EVs Custom tariff waiver/ reduction for EV and components EV specifications, standards and Type approval Fiscal incentives - general EV procurement - rail General pronouncement of support - RE EV operating characteristics Rail infrastructure - target Exploitation of new resources - RE Fuel/energy economy labelling for vehicles Limit/ban production/import/assembly of ICE vehicles

Registration tax waiver or reduction for EV and components Standards for Charging Stations

2015-2023

Road use tax waiver or reduction for Evs EV performance standards V2G interface standards Distinct registration plates for Evs Import-based EV target Charging connector and cable standards Subsidized charging rates General EV industry plan Standards for Charging Stations EV specifications, standards and Type approval EV procurement targets Grid integration standards ^{Charging protocol standards} Green transport infrastructure Public fleet electrification target Lighter vehicles Net zero EV production targets est specifications -EVS EV safety standards Renewable energy targets Green routes for Evs EV Modal targets RE for EV charging EV included in LTS EV Modal targets Fiscal incentives - general Battery standards - safety Sales targets Battery standards General pronouncement of support - RE EV standards - multidimension^{EV procurement - rail} Export financing incentives Total EV fleet target Battery standards (general) Purchase incentives for EVs and components Defined institutional setup Charging safety standards Charging systems standards(general) Preferential tax rates for Evs Dedicated National EV Policy/Roadmap/Strategy

Overall – Most Frequent



Distribution of Measures by "Pillar"

Services

EVs and EV components													General								Infrastructure						
Test specifications - Evs Regulations	EV safety standards Regulations		EV standards - multidimension Regulations			Custom tariff waiver/ reduction for EV and components Fiscal incentives and disincentives			Corporate income tax reduction/holiday - manufacturers of Evs/ components Fiscal incentives and disincentives		Import duties reduction for EVs and components Fiscal incentive and disincentives		inc for an	rchase tentives r EVs d		General pronouncem support for emobility Policy frameworks ar plans	Renewable energy targets Policy frameworks and action plans				General pronouncement of support for charging infrastructure Policy frameworks and action plans		for r ng supp trans	stments new portive sport			
							Fiscal incentives and		exe V red ts raw s mat sup	Import tax exemption/ reduction - raw materials, supplies, components		EV		Excise tax waiver for EV and			General pronouncem support - RE Policy frameworks ar	General General				Renovating and					
EV specifications, standards and Type approval Regulations	V2G interface standards Regulations				Test		Excise to for EV a compone	nd ents -	ver		Equity subsidy for	Ταχ			Road use tax		action plans							Green tro infrastruc Regulatio	ture	Standa Chargin Stations Regulat	ng s
Battery standards -	Domestic or			EV			Fiscal inc general	entive									Net zero Policy frameworks ar action plans	nd	EV inclu in NDC Policy		Local renewable						
safety Regulations	local content Guidelines -						Fiscal incenti and disincen Pronounced		es E	V Procuremen	it									General EV industry plan				Grid inte standard Regulatio	s	1	EV
EV performance standards Regulations	Guidelines -						investme Fiscal inc and disir	centive:	s p es P	v roduction urchase ta	x									Car mai Oth				Incentive for EV	a Tax	RE for EV	
Mandated EV % target in fleet	Registration system revision to						Sales tax waiv for EV and components Fiscal incentive			eduction fo	ж 						Defined institutional	Stimul						charging		charg	
General pronouncement of support for EV usage Policy frameworks and action plans EV Modal targets Policy frameworks and action plans		Public fleet electrification target Policy frameworks and action plans			et				EV De Other	monstration	·		Research and development - EV and			setup trainin Institutional		ŋ					stations targets - total				
		EV production targets Policy frameworks and action plans General pronouncement of					EV			Total EV fleet target Other			Sales targets			Charging connector and cable standards Regulations	Battery swappin standard			Tax Incentives for firms engaging							
									Fuel economy a tailpipe CO2 standards		d Distin	ict				Charging systems				Import tax			mport luty				
	support assembly		for Evs production / / / import ameworks and action																	Purchase							

Charging Equipment & components

48881 10.00

Various Needs in Various Countries



E-2&3wheelers – Nuanced Approaches Emerging



- Different approaches in governing light electric vehicles (i.e. electric 2&3 wheelers)
- Dire need to integrate in policies, infra planning, regulations
- Important to take note of potential consequences (e.g. in terms of registration requirements; operational requirements, etc...; how they are integrated in the existing systems)
- Integrate in data collection

Incentives - Review and iteration



- Wide variety of fiscal measures (so far, >70 unique fiscal measures in our list; almost 40% are focusing on the acquisition of equipment.
- Review and adjustments for fiscal incentives also critical (e.g. EV3.5 in Thailand)
- Non-fiscal incentives need to be iterated and reviewed

Emergent use cases need to be acknowledged



- Various use cases business models are emerging due to the infusion of electric vehicles to mobility services, along with the provision of relevant services
- Policies have been scant, but evidence of early uptake is seen

Charging Infrastructure and Supporting Services



- Countries now issuing various guidelines related to charging and related services and infrastructure
- Integration with new developments seen in policies of some countries
- Simplification of procedures; combination with other incentives may prove to be effective

Evolving Institutional Setups, Supporting Capacity Development



- Setting up of dedicated committees composed of multi-sectoral/multithematic representation
- Recognition of importance of building capacities of local institutions and ecosystem stakeholders (users, drivers, maintenance, etc...)

End-of-Life Measures still at Infancy



- Bangladesh –Incentives for setting up battery recycling industry
- Kazakhstan has adopted an ambitious framework for extended producer responsibility (EPR)
- Tajikistan Integration of battery recycling technologies development in their Electric Transport Development Program (2023-2028)





.....

https://asiantransportoutlook.com/



A new move for business - EV City Casebook
Electric cycle logistics in...
Electric cars, buses, and taxis have rapidly
increased in numbers, movingbeyond early

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

emobility.tools

GUIDELINES FOR MRVing Emission Reduction of Emobility Policies and Projects

- Based on the guidelines produced through the No and Low Emission Transport project being implemented by the United Nations Environment Programme (UNEP). The project aims to promote a global transition to no and low emissions mobility for improved air quality and climate change mitigation.
- The purpose of this document is to provide bespoke guidance towards the measurement, reporting, and verification (MRV) of the emissions impacts of projects, programmes, and interventions focusing on the electrification of 2&3 wheelers.
- In particular, the guidance is directed at proponents of such initiatives in developing countries wherein data, resources and capacities may not be at optimal levels.
- This report has been produced for UNEP by the Urban Electric Mobility Initiative (UEMI).



- Asia is **key** to determining the future of e-mobility globally.
- Policy measures are diversifying, expanding, though we are seeing evidence of lop-sided prioritization of measures focusing on bolstering EV production and EV demand – are we merely electrifying congestion?
- It is worthwhile to emphasize that e-mobility needs to be embedded in a wider sustainability framework
- Adaptive evolution and adjustment of the policy measures are key towards successful scaling up
- Electrification of the sector entails a recognition of the interlinkages of the different sectors, and the need to utilize a socio-technical paradigm in moving forth with scaling up effortsE-mobility should not just about the vehicles.

"ATO translates data into insights, policies, and investments"

asiantransportoutlook.com

ATO Teamasiantransportoutlook@gmail.comJamie Leatherjleather@adb.orgAndres Pizarroandres.pizarro@aiib.orgManuel Benardmanuel.benard@aiib.orgAlvin Mejiaalvin.mejia.a@gmail.comSudhir Gotasudhirgota@gmail.com

Twitter@transportATOLinkedInbit.ly/ATOlinkedin



