EUROPEAN CHAMBER OF COMMERCE OF THE PHILIPPINES

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18 August 2023

HON. PATRICK T. AQUINO, CESO III
Director IV, Energy Utilization Management Bureau
Department of Energy

Subject: FEEDBACK FROM EUROPEAN CHAMBER COUNTERPARTS ON THE ELECTRIC VEHICLE INDUSTRY IN SELECT ASIAN COUNTRIES

Dear Director Aquino:

The European Chamber of Commerce of the Philippines (ECCP) has fostered long-term partnerships with other multi-stakeholders to achieve a globally competitive Philippine economy. Together with its Automotive Committee, the Chamber recognises that collaboration can stimulate the growth of local industries including those associated with electric vehicles (EVs). On this note, the ECCP has sought the feedback and input of our partners from the private sector, Nomura Research Institute (NRI) Consulting & Solutions India, and other European Chamber counterparts in Asia to gather relevant comments and information to further improve the implementation of the Philippine Comprehensive Roadmap for the Electric Vehicle Industry (CREVI) and create an EV ecosystem that encourages investments, generates employment, and contributes to economic development.

Best practices adopted by the country's regional peers may be considered by the concerned national government agencies (NGAs) to accelerate the demand for the EV industry in the Philippines. Based on the input we received from industry experts, the country can leverage its position in Asia through regulatory support to incentivise industry players as well as streamline and standardise EV manufacturing processes, charging infrastructure, battery swapping systems (BSS), EV retrofitting, and EV battery disposal, among others.

Working hand in hand with government bodies and regulatory agencies is essential in creating a conducive environment for EVs. Clearer policies that offer incentives for EV adoption should be formulated to help promote EV development, commercialisation, and utilisation. Following the trends in Asia, more tariff reductions, tax cuts extensions, reduced registration fees, and preferential parking and toll rates should also be available in the Philippines. Likewise, manufacturers and consumers of EV parts and components should be incentivised. Having clear promulgations on incentives that apply to various EV types, energy providers, and EV charging stations (EVCS) must also be in place. We also reiterate the call for the inclusion of two-wheelers–as the primary choice of transport for ordinary Filipinos, and more than four-wheelers, including trucks and buses, in the zero duties scheme.

While we recognise that exemption of duties for hybrid electric vehicles (HEVs) is inevitable, the Committee strongly believes that incentivising plug-in hybrids would be more beneficial for the industry as well as in achieving the commitment of the Philippines to reduce greenhouse gas (GHG) emissions. Moreover, the provision of grants for EV research and development (R&D) can drive innovation in EV technology, leading to improvements in battery efficiency, vehicle design, and overall performance of EVs. As a non-fiscal benefit and to ensure ease of doing business in the Philippine EV industry, the government must also issue green licence plates that could unlock a number of incentives and opportunities for EV users.

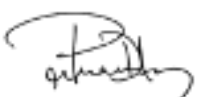
The Committee also reiterates that the EV ecosystem is mainly founded on two pillars: vehicles and a charging station (CS) network. As such and with reference to the existing policies of select Asian countries, the

Philippines should design technical regulations on EV charging infrastructure to ensure the safety and standard of EVCS. The policies should cover different facets of the CS network such as batteries and electric charging equipment. While policies have not been fully established in other Asian countries for BSS, retrofitting, and EV battery disposal and recycling, the Philippines should already commence laying the foundation to regulate the aforementioned segments. Addressing these regulatory hurdles will ensure the development of safety standards and emission regulations tailored specifically for EVs.

For your kind reference and review, please refer to the matrix below highlighting the comments and input of our partners. Should you have any questions or concerns, please do not hesitate to contact Ms. Chin Nethercott at advocacy@eccp.com or via mobile at +63917-871-9778 (SMS/Viber).

Thank you very much in advance for your consideration.

Regards,



Paulo Duarte
Bosch Philippines Managing Director
ECCP President and Automotive Committee Co-Chairperson

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ECCP Automotive Committee Co-Chairperson

Electric Vehicle (EV) Industry in Select Asian Countries

(Please access documents from the EuroCham counterparts and Nomura Research Institute (NRI) Consulting & Solutions India here.)

NATIONAL EV POLICY FRAMEWORK					
Vietnam	**Indonesia**	**India** (NRI Consulting & Solutions India)	**Singapore**	**Malaysia**	**Thailand**
• **Technical regulations and standards for both 2-wheel and 4-wheel EVs**, including Vietnamese national technical regulations (QCVN), are currently being drafted. • **Prime Minister's Decision 876** dated 22 July 2022 approved the action program for the transition to green energy and mitigation of carbon dioxide and methane emissions from transportation. (Please see Annex No. 1.1).	• **Presidential Regulation No. 55 of 2019 on the Acceleration of the Battery Electric Vehicle (BEV) Program for Road Transportation** serves as Indonesia's framework for EV growth. • **Minister of Industry Regulation No. 6 of 2022** set out a local content calculation for the BEV industry. BEV producers and BEV component producers are required to prioritise local content use, which will be gradually increased starting from 35% by 2019 until 2021, and up to 80% by 2030.	• The **National Electric Mobility Mission Plan (NEMMP)** was launched in 2012 to improve national fuel security. NEMMP became the vision and roadmap for all EV policies. • The **Phased Manufacturing Program (PMP)** was introduced to aid indigenous manufacturing of EVs, its assemblies, and parts. (Please see Annex No. 7). • India does not have any policies in place exclusively to promote the research and development of the EV and infrastructure. However, all the existing policies are designed to encourage innovation around the EV ecosystem.	• As a first step, Singapore has vested new statutory functions in the Land Transport Authority (LTA) to promote and regulate the safe use of EVs and EV charging. • All new car registrations will have to be of cleaner-energy models from 2030. Cleaner-energy models include electric, hybrid, or hydrogen fuel cell cars. • **The country will also stop new diesel car registrations beginning in 2025.**	• To further support EV growth, Malaysia's **New Industrial Master Plan 2030** is set to be launched in August 2023. • The government has established the **National EV Steering Committee (NEVSC)** led by the Ministry of International Trade and Industry (MITI). • There is a Bumiputera equity requirement that **foreign or non-Bumiputera-owned car importers have to partner with Bumiputera- owned companies in order to apply for the approved permits necessary to import cars into Malaysia**. **This equity rule may prevent global car manufacturers from entering the local market directly.**	• **30@30 Plan:** Thailand will produce Zero-Emission Vehicles (ZEVs), which will be 30% of Total car production (or 750,000 Cars) by 2030. By 2025, all vehicles procured for government agencies and public fleets will be zero-emission vehicles (ZEVs). 15% of all new vehicles to be produced shall be ZEVs. By 2030, 30% of all new vehicles produced to be ZEVs. Meanwhile, all new vehicles to be produced will be ZEVs by 2035.

EV INCENTIVE STRATEGY					
Vietnam	**Indonesia**	**India**	**Singapore**	**Malaysia**	**Thailand**
• **Prime Minister's Decision 876** includes tax incentives and road transport manufacturing and development strategy. Special Consumption Tax has also been reduced from 2022 to 2027. Meanwhile, there is **no registration fee** for EVs from 2022 until 2025 (Please see Annex Nos. 1.2 and 1.3). • There is a **limited subsidy program to promote and support EV manufacturing**. • Policies in Vietnam still fall short in terms of clear regulations and promulgations that apply to different types of electric vehicles.	• **Carbon Dioxide Emissions and Fuel Consumption-Based Taxation Scheme** differentiates tax rates based on CO2 emissions and fuel consumption. (Please see Annex No. 2.1). • The government waives the **Motor Vehicle Tax and Ownership Transfer Fee** for EVs. • Minister Industry Regulation No. 6 of 2023 provides incentives for the purchase of e-motorcycles. • At the core of Minister of Finance Regulation No. 38 of 2023, payable value-added tax (VAT) on deliveries of certain types of four-wheeled, battery-powered vehicles and/or certain types of battery-powered vehicles will be borne by the government during the 2023 fiscal year.	• **Faster Adoption of Hybrid & Electric Vehicles (FAME) I and II** offer grants on EV consumers and pilot projects and **research and development (R&D), technology development,** and **public charging infrastructure components**. (Please see Annex No. 3.1). • There are **Goods and Service Tax (GST) rate cuts and road tax waivers,** in addition to the state-level subsidies for setting up charging infrastructure. • There is a plan to provide **green license plates to BEVs and exempt them from permit requirements**. • **Production Linked Incentives (PLI) scheme for National Programme on Advanced Chemistry Cell Battery Storage** • **PLI scheme for Automobile and Auto Components**	• The LTA will incentivise charging operators and owners to deploy chargers by offering grants. • Under **EV Early Adoption Incentives,** owners who register fully electric cars will receive a rebate of 45% off the Additional Registration Fee. • Under the **Enhanced Vehicular Emissions Scheme (VES)**, rebates for certain categories of vehicles will be increased. • **Additional Registration Fee (ARF) floor** will be reduced to SGD 0 for fully electric cars and taxis **Road taxes for fully electric and petrol-electric cars will likewise be lowered**. • **Commercial Vehicles Emissions Scheme** gives a surcharge for the most pollutive vehicles and incentives for the least pollutive vehicles. (Please see Annex No. 4.1).	• The 2023 Budget shows that the current **import and excise duty exemption for Completely Built-Up (CBU) EVs will be extended** until 2025. • **Completely Knocked Down (CKD) vehicles qualify for government benefits and incentives.** Excise duty and sales tax exemption for CKD EVs have been extended until 2027.	• There are incentives for the following: ○ Manufacturers of BEVs, plug-in hybrid electric vehicle (PHEV), HEVs, and fuel cell electric vehicles (FCEVs) ○ Battery electric buses and trucks ○ Battery electric motorcycles, tricycles, bicycles, and boats ○ Battery charging station ○ Battery swapping station ○ Electrical parts • 2-wheel and 4-wheel BEVs have the following: ○ CBU import duty exemption ○ Excise tax reduction ○ Cash subsidy • **There are Additional Merit-based Incentives for Competitiveness Enhancement** and **Retention & Expansion Program** (Please see Annex Nos. 5.1 and 5.2).

TECHNICAL REGULATIONS ON EV CHARGING INFRASTRUCTURE					
Vietnam	**Indonesia**	**India** (NRI Consulting & Solutions India)	**Singapore**	**Malaysia**	**Thailand**
• Not yet available • In Vietnam, there is a limitation in public investment for infrastructure and technology for EV charging stations (Please see Annex No. 1.4).	• **Minister of Energy & Mineral Resources Regulation No. 1 of 2023** governs the implementation of the EV Charging Station ecosystem in Indonesia. This sets out the types of charging infrastructure (EV Charging Stations and EV Battery Exchange Stations), online applications, and applicable tariffs. • EV charging businesses must have an online application that involves the registration of EV owners; provides information on the location of EV charging machines and the types of sockets available; and gives information on electricity charging rates, among others. Data protection is yet to be regulated within the EV ecosystem.	• **The government plans to set up at least one charging station in a grid of 3kmx3km**. Furthermore, guidelines indicate the **plans to set up one charging station every 25 km on both sides of highways**. In line with this goal, the Department of Heavy Industries has already sanctioned around 3,000 charging stations among which nearly 1,600 are fast chargers (Please see Annex No. 3.2). • At present, **the government has released minimum infrastructure and communication requirements for public charging infrastructure along with the charging equipment standards**. Please see Annex No. 3.6 for the minimum requirement for public charging infrastructure.	• The government has set the goal of 60,000 charging points by 2030. The LTA's charging plan prioritises coverage over volume. for all parking lots to have charging points by 2025. • All **EV charging systems have to be certified compliant with Technical Regulations 25 (TR25)**, which is an adoption of EU standards and guidelines before they can be installed and used. TR25 provides technical safety requirements for EV charging systems in Singapore. • For non-landed private residences the government launched the **EV Common Charger Grant** by co-funding installation costs. (Please see Annex No. 4.2).	• One of NEVSC's key performance indicators is to have 10,000 EV charging stations nationwide by 2025 to encourage greater EV ownership. • In July 2022, the Malaysian Energy Commission released its **Guide on Electric Vehicle Charging Systems (EVCS**). This Guide is designed to improve the safety of EVCSs. It sets requirements based on laws and regulations and various standards, maintenance and inspection, site, and operational requirements, and design of signs for charging stations.	• The government is currently strengthening the EV ecosystem by establishing charging facilities (home and public chargers) as well as standard and testing facilities. • The Thai Industrial Standards Institute (TISI) will proceed on **standards of EVCS, electromagnetic compatibility, batteries for EVs, and DC meters for billing system charging stations**.

TECHNICAL REGULATIONS ON BATTERY SWAPPING SYSTEMS (BSS)					
Vietnam	**Indonesia**	**India** (NRI Consulting & Solutions India)	**Singapore**	**Malaysia**	**Thailand**
Not yet available	• **Minister of Energy & Mineral Resources Regulation No. 1 of 2023** sets out the requirements of business actors to provide EV BSS; the business models recognised by the government for battery leasing and location requirements; as well as the technicalities of the BSS operation. • BSS business entities are required to own or operate an online battery exchange application that functions as the registration media for EV owners; providing information including the location of the battery exchange machine; and information listing the available vacant cabs on battery exchange machines.	• **Although the Ministry of Power (MoP) has published the guidelines for battery swapping stations, it does not have a provision to avail subsidy under the FAME II scheme**. A draft policy has also been introduced on BSS and interoperability standards for electric 2Ws and 3Ws. The draft policy highlights the **promotion of battery swapping with ACC batteries**. The policy also sets the principles behind **technical standards to enable interoperability**. However, the policy will be redrafted as it has met a lot of backlash concerning interoperability concerns from the manufacturers and other stakeholders.	• Should a company be keen and interested, it could apply to go on trial thru a **"regulatory sandbox"** in Singapore. Currently, there is a company doing a trial on 2-wheeler BSS. • TR25 sets out the requirements for battery swap systems.	-	• In Thailand, **research and development of a swappable battery platform for electric motorcycles is being conducted** by the Ministry of Higher Education, Science, Research and Innovation in collaboration with the National Science and Technology Development Agency (NSTDA) and other agencies.[1]

[1] The Nation. (01 June 2023). Thailand developing swappable battery packs to accelerate EV transition. Retrieved from https://www.nationthailand.com/thailand/general/40028745

TECHNICAL REGULATIONS ON EV RETROFITTING					
Vietnam	**Indonesia**	**India** (NRI Consulting & Solutions India)	**Singapore**	**Malaysia**	**Thailand**
Not yet available	• **Minister of Transportation Regulation No. PM 15 of 2022** serves as the basis for conversions of all non-motorcycle vehicles with combustion engines into BEVs. This regulates the implementation of conversion workshops and conversion certificates, as well as requirements for various components of the vehicle.	-	Not yet available	-	-

TECHNICAL REGULATIONS ON EV DISPOSAL AND RECYCLING OF EXPIRED BATTERIES					
Vietnam	**Indonesia**	**India** (NRI Consulting & Solutions India)	**Singapore**	**Malaysia**	**Thailand**
Not yet available	-	Not yet available	Together with the Environment Agency, the LTA has introduced a **producer responsibility framework** that compels all battery producers to recycle batteries. Batteries could also be reconditioned or used as energy storage.	• Malaysia is studying a suitable approach to implement the **end-of-life vehicle (ELV) management policy by 2025**.	• The Department of Industrial Work will prepare **an EV battery end-of-life plan**. • The Pollution Control Department will enact policies for **EV battery end-of-life management**.

On EV trucks and buses:

- In Germany and Brazil, EV Trucks are as widespread as passenger cars due to the high acquisition costs of vehicles as well as the need to acquire charging infrastructure.
- Electric trucks are much more affected than passenger cars by battery capacity and weight, which affect their payload and range.
    - For light and medium duty, city distribution, and operations, some electric trucks can get by with AC charging, with proper planning.
    - For heavy trucks that have batteries that are 4 to 5 times capacity and heavier than light-duty trucks, it is recommended that customers purchase and install DC chargers in their facilities. DC chargers are not just much more expensive than AC chargers but also require proper allocation and planning.
- With the right price points plus government support through incentives and lessening of restrictions, businesses can benefit by shifting to electric trucks. While electricity prices in the Philippines are still relatively high, this is still a lesser cost to pay than wildly fluctuating fuel prices.
- Recommendations on incentives:
    - Electric trucks should be exempted from number coding and truck bans.
    - Contractors that use electric trucks should be prioritised for government projects
    - The government has to push financial institutions to be more accommodating with financing E-related projects, EVs, charging infrastructure, and even battery repurposing. Right now, banks are still skeptical about the resale value of EVs.

ANNEX: VIETNAM

1.1 Vietnam: Action Plan for green conversion from 2022 to 2050

Timeline	Objective	Action Plan and Target	Implementation Measures	Notes
2022-2030	Energy efficiency: Enhancement of usage of EVs and vehicles using green energy (GEV)	1. Enhancement of: • Manufacturing, assembling, import of EVs • EV replacement • 100% E5 fuel usage 2. 100% new city buses are EVs/GEVs 3. Development of charging station infrastructure	1. For phase-out of vehicles using fossil fuels (VUFF): to make/revise legal framework, masterplan, and policies related to: • Condition for road transport, business, registration, end-of-life vehicles, homologation • Technical regulation, limitation, guideline in production, import, usage of vehicles with high energy efficiency, EVs/GEVs Incentives for businesses to invest in infrastructures and EVs' infrastructure development 2. For EVs/GEVs replacement: program/incentives 3. Infrastructure development 4. Fuel consumption limitation (2022-2030) 5. Public transport development 6. International cooperation and media	Nationally Determined Contributions (NDC) 2020 Commitment
2031-2050	Development of proper means of transport and the necessity of infrastructure for EVs and GEVs	1. VUFF production/assembly/ import phase out (stop by 2040) 2. Minimum 50% of vehicles driving on the road are EVs/GEVs (from 2030 onwards) 3. 100% of new taxi vehicles are EVs/GEVs (from 2030 onwards)		COP26 Commitment
2050 onwards	Net zero emission	1. 100% vehicles driving on the road are EVs/GEVs 2. Completion of charging infrastructure satisfying the demand		

1.2 Vietnam: Special Consumption Tax (^{0}/0): Law 03/2022/QH15 dated 11 Jan 2022

Electric Vehicles	1 Mar 2022-28 Feb 2027	1 Mar 2027 onwards
BEV ≤ 9 seats	~~15~~ 3	11

BEV 10-15 seats	~~10~~ 2	7
BEV 16-23 seats	~~5~~ 1	4
Pick-ups (carrying passengers & goods)	~~10~~ 2	7

1.3 Vietnam: Registration Fee (^{0}/0): Decree 10/2022/ND-CP dated 15 Jan 2022

Electric Vehicles	1 Mar 2022-28 Feb 2025	1 Mar 2025 28 Feb 2027
BEV S 9 seats	~~10 12~~ 0	5-6
BEV 10-15 seats	~~10 12~~ 0	5-6
BEV 16-23 seats	~~10 12~~ 0	5-6
Pick-ups (Carrying passengers & goods)	~~10 12~~ 0	5-6

*Pickup is subject to 2 kinds: Passenger Pickup (100% ownership tax same as passenger cars) and goods pickup (60% ownership tax of passenger car)

1.4 Vietnam: Only VinFast is making significant efforts in EVCS technology. Proprietary VinFast charging stations characteristics in the country:

Charger	Electric car				E2Ws
	Super fast charging DC 250kW	Fast charging DC 60kW	Fast charging DC 30kW	Fast charging DC 11kW	
Operating voltage (V)	400 VAC ± 10%, 3-phase	304-456 VAC, 3-phase	304-456 VAC, 3-phase	304-456 VAC, 3-phase	220 VAC ± 5%, 1-phase
Output voltage	200 - 1000 VDC	200-1000 VDC			
Capacity per charging port	≥ 250kW	≥ 60kW	≥ 20kW	≥ 11kW	≥ 1.2kW
Charging time	n/a	30 - 90 minutes (80% of battery capacity)	40 - 120 minutes (80% of battery capacity)	40- 120 minutes (80% of battery capacity)	4 hours (full standard charging)

ANNEX: INDONESIA

2.1 Indonesia: CO2 Emission Based Luxury Tax

	Category		Fuel Consumption (km/l)		CO2 (g/km)	E/G Volume (cc)			Non-Program	
			Gasoline	Diesel		< 1.5	1.5 - 3.0	> 3.0 – 4.0	BEV & FC	>4.0
LCEV	Passenger Vehicle	< 10 persons	>15.5	>17.5	<150	15%		40%	15%	
			>11.5 - 15.5	>13.0 - 17.5	150 – 200	20%		50%		
			9.3 - 11.5	10.5 - 13.0	>200 – 250	25%		60%		
			<9.3	<10.5	>250	40%		70%		
		≥ 10 s.d. 15 persons/Minibus	>11.6	>13.1	<200	15%		25%	15%	
			=<11.6	=< 13.1	>=200	20%		30%		
	Commercial	Double Cabin	>15.5	>17.5	<150	10%		20%	10%	
			11.6 - 15.5	13.1 - 17.5	150 – 200	12%		25%		
			<11.6	<13.1	>200	15%		30%		
	PROGRAM	KBH2	>=20	>=21.8	<=120	3%				
		Full Hybrid/Mild Hybrid	>23	>26	<100	6% (1); 10% (2) [FH]	8% (1); 12% (2) [MH]	20%		
			>18.4 – 23	>20 - 26	100 – 125	7% (1); 11% (2) [FH]	10% (1); 13% (2) [MH]	25%		
			>15.5 - 18.4	>17.5 - 20	>125 – 150	8% (1); 12% (2) [FH]	12% (1); 14% (2) [MH]	30%		
		Flexy Engine (E100/B100)	-	-	-	8%				
		PHEV	All type	All type	All type	5% (1); 8% (2)				
		BEV, FC	>28	>28	<=100	0%				
	Supercar									95%

Tax phases for hybrid EV:

- Phase 2: effective 2 years after there is realization of minimum IDR 5 trillion investment in BEV production in Indonesia or when a BEV manufacturer starts commercial production in Indonesia
- Phase 1: before the above-mentioned condition realized

Definition:

- Full Hybrid EV: hybrid electric vehicle that has the function of idling stop, regenerative braking, electric motor assist, and is capable of being fully driven by an electric motor (EV running mode) for a certain time and speed.
- Mild Hybrid EV: hybrid electric vehicle that has the function of idling stop, regenerative braking, electric motor assist.

ANNEX: INDIA

3.1 India's Climate Goals: India submitted the updated Nationally Determined Contribution (NDC) policy to the United Nations Framework Convention on Climate Change (UNFCCC) announcing a new target of reducing Emission intensity by 45% from its 2005 levels by 2030 in August 2022. By 2030, India also aims to meet half of India's power capacity with non-fossil fuels. These goals are a roadmap to achieve the ambitious goal of full decarbonisation by 2070 as announced at COP26 in November 2021.

3.2 India's Phased Manufacturing Program (PMP)

Item Description	Current Basic Customs Duty (BCD) w.e.f. 30/01/2019	Phased Manufacturing Proposal (PMP)

			Proposed BCD	Proposed Date of PMP
CBU	Bus (HS 8702) & Trucks (HS 8704)	25%	50%	April 2020 onwards
SKD	PV (HS 8703) & 3W (HS 8703/8704)	15%	30%	April 2020 onwards
	2W (HS 8711)		25%	
	Bus (HS 8702)		25%	
	Truck (HS 8702)		25%	
Lithium Ion Cells (HS 85076000) for use in the manufacture of Lithium-ion accumulators for electric vehicles		5%	15%	April 2021 onwards
Battery packs (HS 8507) for use in the manufacture of electric vehicles		5%	15%	April 2021 onwards
Parts for use in the manufacture of electric vehicles like AC/DC Charger, AC/DC Motor, AC/DC Motor Controller, Power Control Unit (Inverter, AC/DC Converter, Condenser), Energy Monitor, Contactor, Brake System for recovering, Electric Compressor		0%	15%	April 2021 onwards

3.3 India's FAME (Faster Adoption of (Hybrid &) Electric Vehicles)

a. **FAME I:** Around 2.8Lakh EVs were supported with the upfront reduced price while purchasing with total demand incentives of approximately INR 343 crores. The Government sanctioned 465 buses for various cities under the scheme.
b. **FAME II incentives**
    i. For e-2W - INR 15000/ kWH (maximum up to 40% of the cost of the vehicle)
    ii. For e-3W - INR 10000/ kWH (maximum up to 20% of the cost of the vehicle)
    iii. In the backdrop of the government's decision to reallocate supplementary INR 1,500 crores under the FAME II scheme, the demand incentive is now reduced to INR 10,000 per kWH along with the reduced cap on the maximum subsidy on ex-factory price to 15%, The amendment came into effect from 1 June 2023.
    iv. As of December 2022, close to 7.7Lakhs electric vehicles have been supported via demand incentives of around INR 3,311 crores. The government has also sanctioned 6,315 e-buses to 65 cities across 26 states/union territories. 2,877 charging stations have also been sanctioned in 688 cities across 25 states/union territories.

3.4 India's PLI scheme for Automobile and Auto Components expected annual incentive outlay

Applicable incentive	Disbursement of Incentive	Total incentive (INR Crore)
FY 2022-23	FY 2023-24	604
FY 2023-24	FY 2024-25	3150
FY 2024-25	FY 2025-26	5925
FY 2025-26	FY 2026-27	7199
FY 2026-27	FY 2027-28	9060
	Total	25938

3.5 India currently has 6,856 charging stations and plans to increase the number of charging stations to approximately 25,000 by 2025 and 46,000 by 2030. Currently, India is lagging behind major markets in terms of charging infrastructure as China and the US have EV to charger ratios of 6 and 19 which is exponentially ahead of India's charger EV ratio of 135.

3.6 The minimum requirement for public charging infrastructure in India:

c. Infrastructure:
    i. Exclusive transformer with all related substation equipment including safety equipment as mandated by the Supply code of the appropriate electricity authority
    ii. Appropriate civil, cabling, and electrical works
    iii. Adequate space for charging and vehicle entry/exit
    iv. Appropriate Fire protection system and equipment
    v. In the case of charging infrastructure for long-range EVs and heavy-duty EVs,
        1. Appropriate liquid-cooled cables for high-speed charging facility, for on-boarding of fluid-cooled batteries, if required
        2. Remaining electrical, safety, and civil standards similar to those for PCI for normal EVs, suitably adopted for long-range/heavy-duty EV stations
d. Communication
    i. Tie up with at least one network service provider to enable remote slot booking
    ii. Share charging data with the appropriate State Nodal Agency, and adhere to protocols specified by the Bureau of Energy Efficiency (BEE)
e. Standards for plug-in charging equipment: Current EV charging equipment, particularly connector types, are aligned with global usage where CHAdeMO and CCS are prevalent. These standards are not mandatory for 2W/3W EV charging stations. There are no standards defined for battery swapping stations yet. Based on the type of charging (fast/slow), Government has established guidelines for chargers at public charging stations:

Charger type	Charger connectors	Rated output voltage	No. of connector guns	Charging vehicle type
Fast charger	Combined charging system (CCS) – min 50 kW	200-750 V or higher	1CG	4W
	CHAdeMO- min 50 kW	200- 500 V or higher	1CG	4W
	Type 2 AC- min 22kW	380-415V	1CG	4W, 3W, 2W
Slow charger	Bharat DC-001- 15 kW	48 V	1CG	4W, 3W, 2W
	Bharat DC-001- 15 kW	72V or higher	1CG	4W
	Bharat AC-001- 15 kW	230V	3CH of 3.3 kW each	4W, 3W, 2W

3.7 India's Scheme for Enhancement of Capital Goods Sector Phase II consists of six key components, namely,

f. Identification of Technologies through portals for technology innovations
g. Establishment of 4 new advanced centres of Excellence and augmentation of Existing Centres of Excellence
h. Promotion of skill in the Capital Goods Sector – the creation of Qualification packages for skill levels 6 and more
i. Augmentation of existing Testing and Certification Centres
j. Setting up of four and augmentation of existing Common Engineering Facility Centres (CEFCs)
k. Setting up ten industry accelerators for technology development

ANNEX: SINGAPORE

4.1 on other EV incentives for EVs:

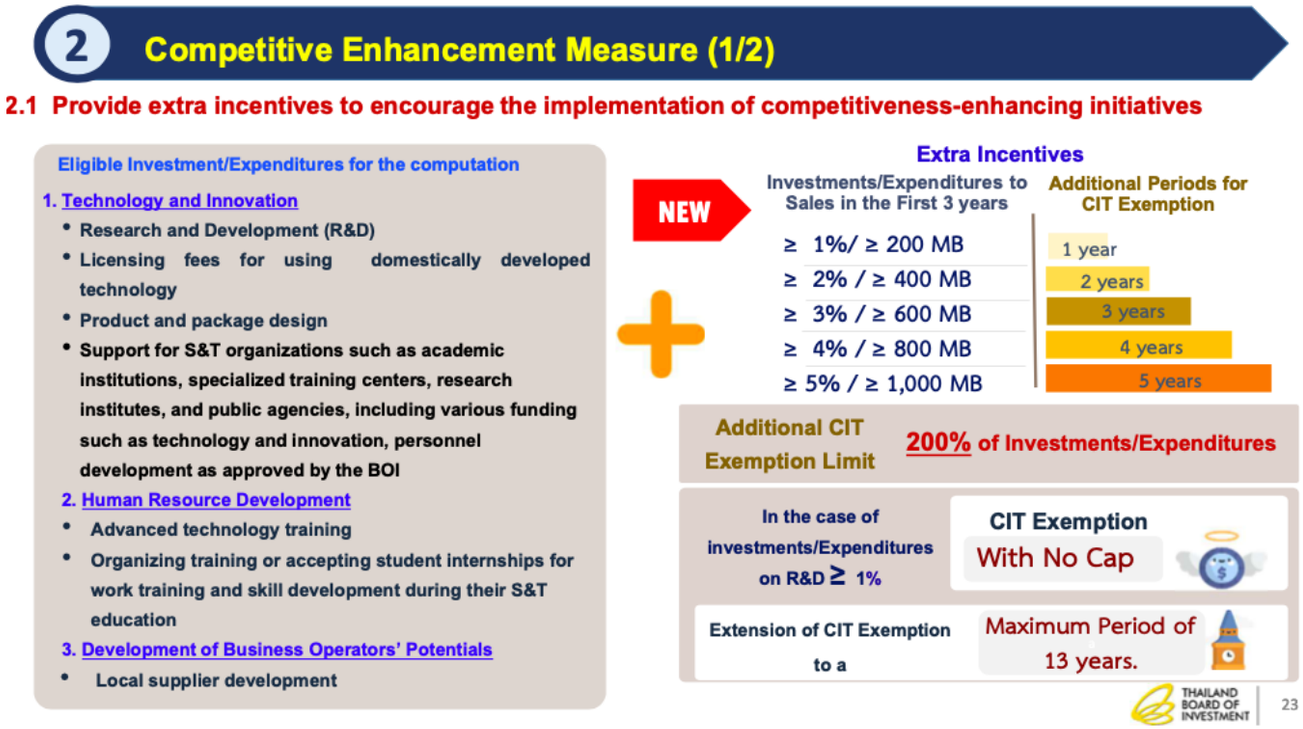
- The government's Green Plan 2030 is supporting early adoption by lowering taxes and giving rebates of up to SGD 25,000.
- Revision of road tax framework for electric cars from 1 January 2022: Road taxes for fully electric and petrol-electric cars will likewise be reduced by up to 34% for those whose cars are in the 90-230kW power rating bracket. This is to ensure that mass-market electric cars pay a similar road tax quantum compared to their internal combustion engine equivalents.lowered.
- Commercial Vehicles Emissions Scheme (CVES) from 1 April 2021 to 31 March 2025: Commercial vehicles are categorised into three bands resulting in a SGD 15,000 surcharge for the most pollutive vehicles to a SGD 15,000 gives a surcharge for the most pollutive vehicles and incentiveincentives for the for the least pollutive vehicles.
- Enhanced Early Turnover Scheme (ETS): From 1 April 2021, existing Euro 4 Cat C diesel vehicles will also be eligible for the ETS incentive.

4.2 on ther regulations for EVCS

- In September 2021, the Urban Redevelopment Authority (URA) and LTA awarded the pilot tender for more than 600 EV charging points in over 200 public car parks across Singapore. More tenders for charging point deployment at public carparks will be awarded in due course.
- The LTA's charging plan prioritises coverage over volume: 40,000 of the new charging stations will be in House and Development Board (HDB) blocks and 20,000 in private premises.

ANNEX: THAILAND

5.1 Thailand's Competitive Enhancement Measures



5.2 Thailand's EV Retention & Expansion Program

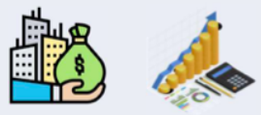
3 Retention & Expansion Program

Objective: To incentivize the existing companies to continue their manufacturing bases and investment in Thailand.

Conditions:

1. Being a BOI-promoted companies for over the past 15 years (2008–2022) of with at least **3 projects,** with a combined investment value (excluding cost of land and working capital) of not less than **10,000 million baht.**

2. Expansion projects with total investment value (excluding cost of land and working capital) of at least **500 million baht**



Incentives for Expansion Projects *(In Addition to the Standard Benefits)*

Group A1+ *(basic incentives of CIT exemption for 10-13 years)*	+ additional CIT exemption for 3 years (not more than 13 years in total)
A1, A2 *(basic incentives of CIT exemption for 8 years)*	+ 50% CIT reduction for 5 years
B, A3, A4 *(basic incentives of CIT exemption for 0-5 years)*	+ additional CIT exemption for 3 years

- For all activities, unless specified directly otherwise by the BOI.
- Promoted projects are not eligible for additional incentives under the Measure to Stimulate Investment
- Application submission by 2023.