

THAILAND'S LONG HISTORY AS AUTOMOTIVE MANUFACTURING HUB

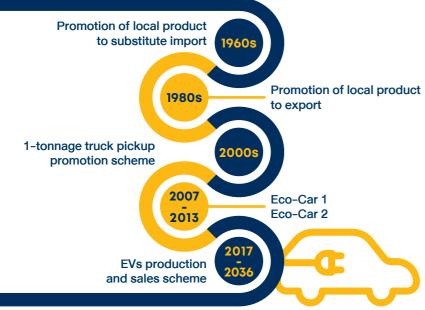
Since the 1960s, Thailand's automotive industry has experienced significant development, transforming from reliance on imports to becoming a global powerhouse in vehicle manufacturing. Over six decades, proactive policies and efforts to create a conducive ecosystem have attracted investors worldwide, particularly from Japan and Europe. As a result, Thailand has become a key production base for multinational automotive companies. In 2023, the country produced over 1.84 million vehicles, securing its position as a leading automotive producer.



Largest automotive producer in ASEAN¹ in 2023



Toth
Largest automotive
producer globally in 2023



Source: ¹Organisation Internationale des Constructeurs d'Automobiles



LEADING IN AUTOMOTIVE EXPORT

In addition to production, Thailand is leading in automotive exports. Over the past decade, the country has **exported around 1 million vehicles annually**, including passenger cars, one-ton pickups, and trucks, to the global market². This achievement has positioned Thailand as a key player in the world. The primary destinations for Thai vehicles are in Asia, followed by Oceania and the Middle East, which together account for around 75% of the total exports.



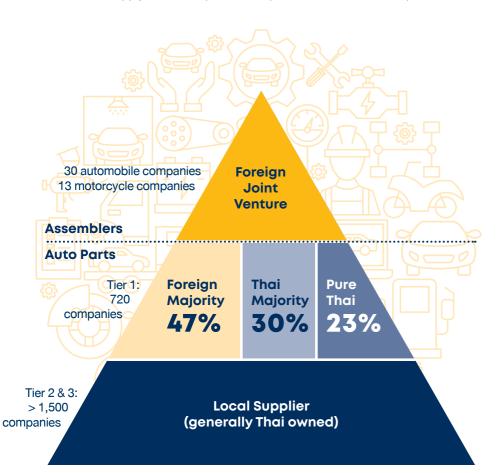
Source: ¹World Trade Statistical Review 2023, ²Thai Automotive Institute

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COMPREHENSIVE AND ROBUST SUPPLY CHAIN

"Behind Thailand's robust automotive industry lies a strong and comprehensive supply chain"

Consistent policy implementation has reinforced the entire sector's supply chain, leveraging the country's solid infrastructure network. This has enabled the Thai automotive supply chain to expand from upstream to downstream operations.



Currently, Thailand hosts 30 automobile companies and 13 motorcycle companies, primarily large-scale foreign enterprises. Additionally, about 2,200 auto parts manufacturers, both local and international, operate in Thailand. This extensive network ensures that local production maintains high quality, timely delivery, and profitability.

Source: Krungsri Research

HUB OF AUTO PARTS PRODUCTION

Thailand's auto-parts industry has become a vital link in the global automotive supply chain, exporting a diverse range of components, including engines, electrical systems, bodywork, windows, gearboxes, tires, and rubber products, to over 100 countries. This achievement has positioned Thailand as a top exporter in both ASEAN and the global market.

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Largest auto parts exporter in ASEAN in 2023

14th

Largest auto parts exporter globally in 2023 Thailand also leads in export of various auto parts including:



Tire ond







60-70%

of all parts used in the manufacture of vehicles are now sourced domestically.



Source: Krungsri Research



Most auto parts manufacturers are located in the central and eastern regions of Thailand, especially in the EEC area

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THAILAND'S TRANSITION TO EMBRACING NEXT-GENERATION VEHICLES

Thailand has not stopped at being a leader in ICE production. Building on past successes and leveraging its strengths, the country is pushing beyond its limits to pursue new industry growth amid a changing landscape. Since 2015, numerous policies have been launched to facilitate Thailand's transition to a future-ready automotive industry, emphasizing innovation, sustainability, and economic growth. These initiatives are preparing Thailand to become a global leader in smart and green mobility.

2015

S-curve Industry

To promote next-generation automotive industry

The S-Curve policy focuses on fostering advanced technology and innovation, driving the new engine of economic growth.

The next-generation automotive industry is introduced as one of the targeted industries under the S-Curve.

•••••

2021

BCG Economy

To enable sustainable and inclusive growth of industry

As part of
the APEC agenda,
the Bio-Circular-Green
(BCG) Economy
emphasizes
sustainability by
promoting eco-friendly
practices and
the advancement of
electric vehicles.

2024

Thailand Vision 2030

Thailand aims to be the regional future mobility hub – Ignite Thailand

has set a goal for
Thailand to become
a regional future
mobility hub,
the central hub for
automotive production
in the future.

The government

The government plans to promote the EV industry throughout the supply chain from R&D to manufacturing

EV: NEXT THAILAND'S PRODUCT CHAMPION IN NEW GLOBAL LANDSCAPE

With a concrete ambition from the Thai government, EVs are set to become a central focus for Thailand's automotive industry, building on the success of its first two product champions: 1-tonne pickups and eco-cars.



1st Product Champion 1-Tonne Pickups



Next Product Champion

EVs

2nd Product Champion Eco Cars

EVs help drive the country towards achieving its climate targets

2030: 40% Greenhouse Gas Reduction

2050: Carbon Neutrality 2065: Net-zero Emission Carbon

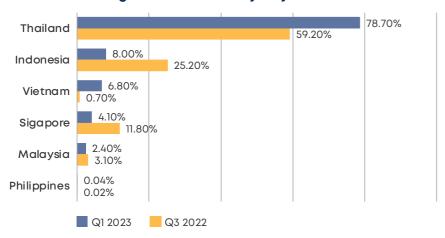
The initiative aims not only to transform the automotive industry into a more advanced and innovative sector but also to drive the nation towards sustainable practices to combat climate change. Similar to other countries prioritizing climate issues, Thailand has set ambitious targets to achieve climate target. Thus, promoting EVs is integral to the country's strategy to adapt to this global shift.

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THAILAND'S AS ONE OF THE FASTEST GROWING EV MARKET IN SEA



SEA Region Sales Shared by Major Countries²

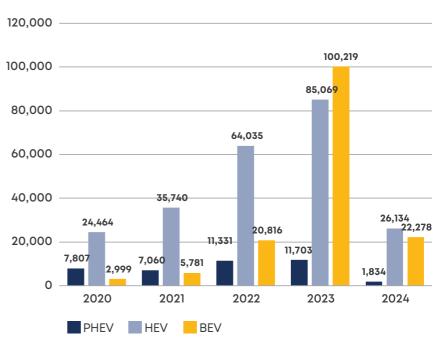


Southeast Asia is one of the fastest-growing regions for EV markets, with Thailand leading in production and sales. Supported by the government, the EV industry has seen significant growth over the years. Numerous EV producers, particularly from China, have chosen Thailand as their manufacturing base. During 2017-2023, over 100 projects have applied for BOI promotion³, highlighting the country's attractiveness as an EV hub in the region.

Source: ¹Ernst & Young Global Limited, ²SEA Passenger Electric Model Sales Tracker, ³Thailand Board of Investment

INCREASING NUMBER OF EV REGISTRATION

Number of New EV Registration



Accumulated Number of EV Registration during 2020 - August 2024



The growing market for EVs in Thailand is clearly evidenced by the number of registrations. From 2020 to August 2024, around 700,000 EVs were registered, with most being hybrid electric vehicles (HEVs), followed by battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs).

In 2023 alone, nearly 200,000 EVs were registered, marking an approximate doubling from 2022. This trend is expected to continue over the next five years, driven by several supportive factors, particularly the government's policies promoting electric vehicles.

Source: Electric Vehicle Association of Thailand (EVAT)

GOVERNMENT'S SUPPORT ON EV INDUSTRY: 30@30 POLICY

Zero Emission Vehicles (ZEVs) at least 30% of the total motor vehicle production by 2030



ZEV Target (Unit)	Passenger Car / Pickup	Motorcycle	Bus / Truck
Production Target	725,000	675,000	34,000
Usage Taraet	440,000	650,000	33,000



The 30@30 policy is a pivotal part of Thailand's journey towards zero emissions, aiming to establish the country as the manufacturing hub for electric vehicles and auto parts in the region. This initiative promotes the production and use of electric cars, motorcycles, buses, and other EVs. It also focuses on developing the necessary infrastructure, supply chain, and ecosystem to support this transition, ensuring Thailand is fully prepared for a sustainable future.

Source: Energy Policy and Planning Office

GOVERNMENT'S SUPPORT ON EV INDUSTRY: EV 3.5

Following the success of the EV 3.0 policy, the Thai government launched phase 2 support measures, known as EV 3.5, to help Thailand achieve its ambitious goal of becoming an EV hub. Effective from 2024 to 2027, this policy focuses on motivating consumers to switch to EVs and raising awareness of climate change and the importance of transitioning to a low-carbon society. It covers electric cars, pickup trucks, and motorcycles. To stimulate domestic investment, the policy also mandates that manufacturers taking advantage of its support measures produce enough EVs to offset imports at a specific ratio, ensuring a balance between production and import reduction.

Support on EV Consumption	Type of Vehicle	Passenger Cars	Pickup Trucks	Motorcycles
	Type of Support	Subsidies	Import Duties Reduction	Lowering Excise Tax
		Up to 100,000 THB	Up to 40%	From 2% to 8%

Support on EV <u>Pro</u>duction Companies Participating in EV3.5 have to set up a production base in Thailand and begin domestic production to offset every imported EV that receives a subsidy

2026:Offset Ration = 1:2



Imported Vehicle



2027:Offset Ration = 1:3



Imported Vehicle



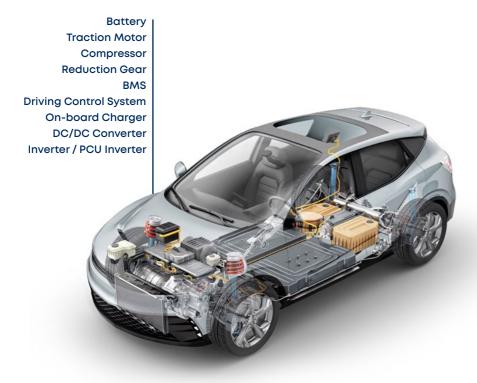
3 Produced Vehicle

Source: Royal Thai Government

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GOVERNMENT'S SUPPORT ON EV INDUSTRY: OTHER SUPPORTING MEASURES

In addition to the EV 3.5 policy, the Thai cabinet approved the **exemption of import duties for 9 EV components and parts** used in manufacturing or assembling EVs and electric-powered boats if imported between 2022 and 2025. These components include batteries, traction motors, compressors, BMS, driving control systems, on-board chargers, DC/DC converters, inverter/PCU inverters, and reduction gears¹.



To further support the use of electric-powered buses and trucks, the government introduced **special tax deductions** for eligible companies. Companies purchasing domestically manufactured vehicles and those importing vehicles will be granted different rates of deduction².



2 time deduct expenses

from actual price when companies buying vehicles manufactured domestically



1.5 time deduct expenses

from actual price when companies buying imported vehicles

Source: ¹The Custom Department, ²The Royal Government

INFRASTRUCTURE DEVELOPMENT: EV CHARGING STATIONS

Increasing the number of EV charging stations to meet the needs of users is always a priority for the Thai government. Key agencies like ERC and EPPO have partnered with EVAT to establish the **Charging Consortium**, aimed at creating a comprehensive network of EV charging stations across Thailand. This initiative ensures convenience for EV users by allowing access to any charging outlet from any service provider. The network is now expanding rapidly, covering numerous locations nationwide.

Available
Charging
Stations in
Charging
Consortium











339 stations







100 stations





323 stations











36 stations





117 stations





Not including public charging stations that serve only specific EV owners e.g., Tesla

Supercharger, MG Super Charge, etc.

Source: Electric Vehicle Association of Thailand (EVAT)

12 EV Source: World Bank

INFRASTRUCTURE DEVELOPMENT: PRIVATE R&D FACILITIES

Knowledge and technological improvement are key drivers propelling Thailand's industry towards next-generation automotive solutions. Beyond being a manufacturing hub, Thailand has become a cluster for automotive research. Major private companies like **Toyota, Nissan, Mitsubishi, Isuzu, Honda, and Bridgestone** have expanded their services to include research and development, ensuring they remain competitive and innovative. The establishment of the **China Automotive Technology and Research Center (CATARC)**, the first in ASEAN and the fourth global facility of its kind, underscores Thailand's commitment to EV development¹. This organization is expected to serve as a support hub for Chinese electric vehicle manufacturers operating in Thailand, aligning with the expanding presence of Chinese EVs in the region.



Toyota Motor Asia Pacific Engineering and Manufacturing



Nissan Technical Center South- East Asia



Isuzu Technical Center Of Asia



Mitsubishi Motors Proving Ground



Honda R&D Asia Pacific







China Automotive Technology and Research Center



INFRASTRUCTURE DEVELOPMENT: GOVERNMENT'S TESTING LAB

Recognizing the importance of standards, the Thai government established facilities to support this goal. In 2016, they began developing the Automotive and Tyre Testing, Research, and Innovation Center (ATTRIC). This key facility aids manufacturers in research, development, and quality management of automotive products, ensuring adherence to high standards.



Government's Facilities





Thailand EV Center of Excellence (TECE)

Supporting human resource development (EV-HRD), pushing the transition to EVs within the ministry's auxiliaries (EV-Transformation), and researching innovation (EV-Innovation).



The Electrical and Electronic Products Testing Center

Supporting the EV industry through testing services in various areas such as battery safety, battery efficiency, EV parts testing, and other standards related to the EV industry

Source: ¹Royal Thai Government

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BOI'S INCENTIVES FOR EV INDUSTRY

BOI plays a crucial role in the EV ecosystem by boosting direct investments. Under its new investment strategy (2023-2027), the organization has designated the EV industry as a target sector. To attract EV manufacturers to invest in Thailand, BOI offers attractive incentives, including both tax and non-tax benefits, for various types of battery electric vehicles (BEVs), BEV platforms, and the development of software and digital platforms. These incentives support Thailand's goal to become the regional hub for EVs.

Eligible Activities under BOI Promotion



Tax Incentives

Corporate Income Tax Exemption 3-13 Years

- Exemption Import Duties on Raw Material Used in R&D
- Exemption Import Duties on Machinery
- Exemption Import Duties on Raw Materials

Non-tax **Incentives**

- Permit for Foreign Nationals to enter the Kingdom for the Purpose of Studying Investment Opportunities
- Permit to Bring into the Kingdom Skilled Workers and Experts to Work in Investment Promoted Activities
- Permit to Own Land
- Permit to Take Out or Remit Money Abroad in Foreign Currency

In addition to incentives for EVs, components, and charging stations, BOI has introduced measures to support automotive manufacturers implementing automation or robotics to enhance production efficiency. There is also a measure benefiting investors in the production of battery cells for EVs and Energy Storage Systems (ESS).

About Measure

Support the adoption of Automation and Robotics to improve production efficiency for automobile production

Target Activities



Software Programs



Al & Machine Learning



Cloud / Data Center

Incentives

Exemption from corporate income tax for 3 years (50% of investment in automation systems and robots)

Exemption of import duties on machinery

Automotive Industry Upgrade Measure

EV Battery Cells Measure

Support the investment in battery production for electric vehicles and energy storage systems (ESS)

well-recognized battery manufacturer

Producing batteries with

Producing batteries with a life cycle of

Conditions

About Measure Being a leading and

Having a clear plan to produce battery cells

a high energy density of at least 150 Wh/kg

at least 1,000 cycles

Financial support from the National Competitiveness Enhancement

Up to 15 years CIT Exemption

Exemption from income tax on dividends received from promoted businesses

Other incentives from the Investment Promotion Act

Incentives

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