# Industry Report on the Global New Energy Vehicle Industry

**February 2026**

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# CIC Introduction, Methodologies, and Assumptions

CIC is commissioned to conduct an analysis and to produce a report on the new energy vehicle industry. The report commissioned has been prepared by CIC independent of the influence of the Company or any other interested party.

CIC, originally established in Hong Kong, is a Shanghai-based investment consulting company whose services include industry consulting services, commercial due diligence, strategic consulting, and so on. CIC's consultant team has been tracking the latest market trends in sectors such as finance and service, agriculture, chemicals, consumer goods, marketing and advertising, culture and entertainment, energy and industry, healthcare, TMT, transportation, etc., and has the most relevant and insightful market intelligence in the mentioned industries.

The information and data collected by CIC have been analyzed, assessed, and validated using CIC's in-house analysis models and techniques. Primary research was conducted via interviews with key industry experts and leading industry participants. Secondary research involved analyzing data from various publicly available data sources, such as the National Bureau of Statistics of PRC, and various industry associations. The information and data collected by CIC has been analyzed, assessed, and validated using CIC's in-house analysis models and techniques.

The market projections in the CIC Report are based on the following key assumptions: (i) the overall social, economic, and political environment worldwide is expected to remain stable during the forecast period; (ii) related key industry drivers are likely to continue driving growth in the NEV market during the forecast period, such as advancement of technology and infrastructure, supportive policies, and increasing downstream demands, etc.; and (iii) there will be no extreme force majeure or unforeseen industry regulations in which the market may be affected in either a dramatic or fundamental way during the forecast period.

All statistics are reliable and based on information available as of the date of this report. Other sources of information, such as governments, industry associations, or marketplace participants, may have provided some of the information on which data or its analysis is based. Certain amounts and percentage figures included in this report have been subject to rounding adjustments.

All the information about the Company is sourced from the Company's own audited report or management interviews. CIC is not responsible for verifying the information obtained from the Company.

# Terms and Abbreviations (1/3)

| | |
|---|---|
| ACC | Adaptive cruise control, a technology that automatically adjusts a vehicle's speed to maintain a safe following distance from the vehicle ahead. |
| ADAS | Advanced driver-assistance systems, a technology designed to improve vehicle safety and driving convenience by automating and enhancing various driving tasks. |
| ADF | Azure Data Factory, a cloud service for data integration and extract-transform-load projects. |
| AEB | Automatic emergency braking, a technology that detects potential collisions and automatically applies the brakes to prevent or mitigate the impact of accidents. |
| AI | Artificial intelligence |
| APA | Automatic parking assistance, a technology that helps drivers park their vehicles by automatically steering into parking spaces. |
| app | A computer program designed to run on smartphones and other mobile services. |
| AR | augmented reality, a technology that overlays digital information onto the real world. |
| ASPICE | Automotive software process improvement and capability evaluation. |
| BEV | Battery electric vehicle, a type of vehicle powered entirely by electric batteries. |
| BSD | Blind spot detection, a technology that monitors a vehicle's blind spots and alerts the driver to the presence of other vehicles. |
| CAN | Controller area network, a vehicle bus standard that allows microcontrollers and devices to communicate with each other without a host computer. |
| CBU | Completely Built Up Vehicles, vehicles that are fully assembled and ready for use before being exported to the destination market. |
| C discharge | A measurement of the discharge rate of the battery, signifying the safe discharge current a battery can sustain. |
| C-NCAP | China New Car Assessment Program, which is a car safety assessment program run by the China Automotive Technology and Research Center. |
| CNAS | China National Accreditation Service for Conformity Assessment. |
| CLTC | China Light-duty Vehicle Test Cycle, a testing standard to measure and establish a vehicle's driving range developed by China Automotive Technology and Research Center. |
| DDW | Driver drowsiness warning, a technology that monitors driver behavior and alerts them when signs of drowsiness are detected. |
| DMS | Driver monitoring system, a technology that tracks driver behavior and attention to enhance safety by detecting signs of distraction or drowsiness. |
| DOW | Door open warning, a technology that alerts driver when a vehicle door is not securely closed, enhancing safety by preventing accidental openings while driving. |
| ECU | Electronic control units, a device that manages and controls various electronic systems and subsystems within a vehicle. |
| EEA | Electrical and electronic architecture, a framework that integrates and manages a vehicle's electrical and electronic systems to help ensure optimal performance and functionality. |
| emerging NEV companies in China | Automotive original equipment manufacturers (OEMs) that only produce new energy vehicles (NEVs) without backgrounds in traditional vehicle manufacturing. |
| ESC | Electronic stability control, a technology that helps maintain vehicle stability by detecting and reducing loss of traction. |
| EV | Electric vehicle, the battery electric vehicles used for the carriage of passengers. |
| FAPA | Fusion automatic parking assist, a technology that combines multiple sensors to automatically steer and guide a vehicle into parking spaces. |
| FCEV | Fuel cell electric vehicle, a type of vehicle that generates electricity using a hydrogen fuel cell. |
| FCW | Forward collision warning, a technology that alerts driver to potential front-end collisions. |
| FOTA | Firmware-over-the-air, a technology that allows for remote updates and improvements to a vehicle's firmware. |
| GNSS | Global navigation satellite system, a technology that provides precise positioning and timing information worldwide by using a network of satellites. |

# Terms and Abbreviations (2/3)

| | |
|---|---|
| HEV | Hybrid electric vehicle, a type of vehicle that combines an internal combustion engine with an electric motor. |
| HWA | Highway assist, a technology that combines adaptive cruise control and lane-keeping assistance to provide semi-autonomous driving support on highways. |
| IATF16949 | The quality management system requirements for the design and development, production and, when relevant, installation and service of automotive-related products, throughout the automotive supply chain. |
| ICA | Integrated cruise assist, a technology that combines adaptive cruise control with lane-keeping assistance to provide a smoother and safer driving experience. |
| ICE | Internal combustion engine, a type of engine that generates power by burning fuel within a combustion chamber, commonly used in traditional vehicles. |
| IHBC | Intelligent high beam control, a technology that automatically adjusts a vehicle's high beams based on surrounding traffic conditions to improve nighttime visibility and safety. |
| IMU | Inertial measurement unit, a device that measures and reports a vehicle's specific force, angular rate, and sometimes the magnetic field, providing critical data for navigation and stability control systems. |
| IPX8 | An IP Rating representing protection against temporary water immersion more than 1 meter and for more than 30 minutes. |
| IP Rating | Ingress protection rating that classifies and rates the degree of protection provided by mechanical casings and electrical enclosures against intrusion, dust, accidental contact and water. |
| LCA | Lane change assist, a technology that monitors adjacent lanes and alerts driver to potential hazards during lane changes. |
| LDW | Lane departure warning, a technology that alerts driver when a vehicle unintentionally drifts out of its lane. |
| LiDAR | Light detection and ranging |
| LKA | Lane keeping assist, a technology that actively helps steer a vehicle to keep it within its lane. |
| MPV | Multi-Purpose Vehicle |
| NCP | Neta City Pilot Assist |
| NEV | New energy passenger vehicles, comprising of battery electrics vehicles, plug-in hybrid electric vehicles (including REEV) and fuel cell electric vehicles. |
| NMS | Neta 'Magic' Summoning |
| NNP | Neta High-speed Navigation Assist |
| NTP | Neta Memory Parking |
| OEM | Original equipment manufacturer |
| OMS | Occupant monitoring system, a technology that tracks and analyzes the presence and behavior of passengers within a vehicle. |
| OTA | Over-the-air |
| PDCS | Vehicle power domain control system |
| PHEV | Plug-in hybrid electric vehicle, a type of vehicle that combines an internal combustion engine with an electric motor and a rechargeable battery. |
| PKI | Public key infrastructure |
| REEV | Range extender electric vehicle, a type of electric vehicle equipped with an auxiliary power unit that generates electricity to extend a vehicle's driving range beyond the capacity of its battery. |
| SDK | Software development kit, a collection of tools, libraries, and documentation that developers use to create applications for specific platforms or systems. |
| SGW | Start-and-go warning, a technology that alerts driver when traffic ahead starts moving after a stop. |
| SOC | State-of-charge, namely the difference between a fully charged battery and the same battery in use. |
| SOH | State-of-health, namely the difference between a battery being studied and a fresh battery and considers cell aging. |

# Terms and Abbreviations (3/3)

| | | | |
|---|---|---|---|
| **SOP** | Standard operating procedure or protocol | **UDS** | Unified diagnostic services, a standardized protocol used for diagnosing and managing vehicle electronic systems. |
| **SUV** | Sport utility vehicle | **UL 2580** | A standard that evaluates the safety and performance of batteries used in electric vehicles. |
| **TBOX** | Telematics-Box, an automotive electronic control unit handling bidirectional communications between a vehicle and the outside world. | **VSOC** | Vehicle security operation center, a centralized facility that monitors and manages the cybersecurity of vehicles. |
| **TJA** | Traffic jam assist, a technology that provides semi-autonomous driving support in congested traffic conditions by automatically controlling acceleration, braking and steering. | **XPC** | A lightweight mechanism for basic interprocess communication. |
| **TSR** | Traffic sign recognition, a technology that detects and interprets road signs to provide real-time information to driver. | **5R11V** | Five millimeter-wave radars and 11 cameras. |

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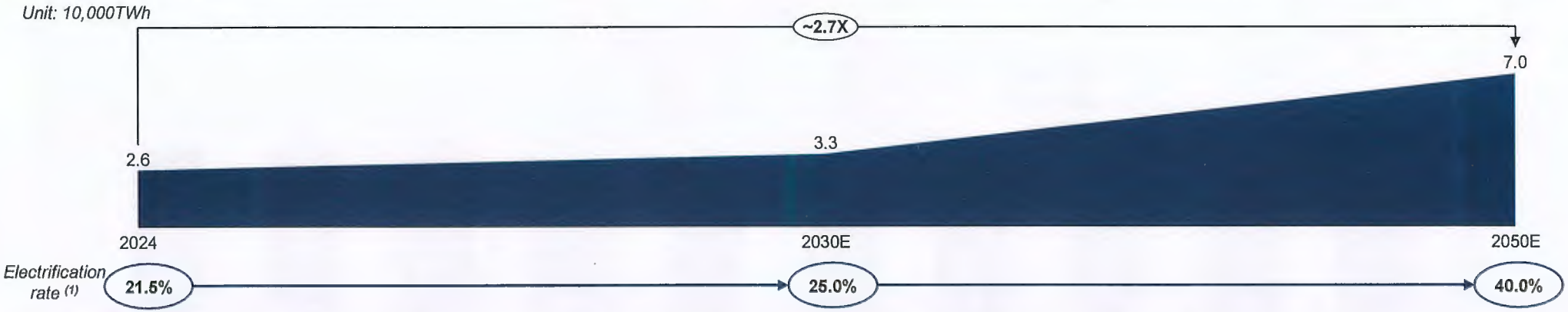
# The Transition of The Energy Structure Serves as the Fundamental Driving Force behind the Global Development of New Energy Vehicles

## Global Electricity Consumption and Electrification Rate, 2024&2030E&2050E




### Key Findings

- In recent years, in order to promote global sustainable development, various countries have actively responded to carbon emission reduction target. Energy, as the lifeblood of national economic development and an important cornerstone of national security, plays a crucial role. To ensure energy security and sustainability, countries around the world have proposed and implemented development strategies for energy structure transformation and building a green and low-carbon economy.
- Electricity is one of the major forms of global end-use energy consumption. Driven by the rapid development of global transportation, industrial manufacturing, artificial intelligence and other industries, global electricity demand continues to rise. Global electricity consumption is expected to increase from 26,000TWh in 2024 to 70,000TWh in 2050, and the electrification rate will increase from 21.5% to 40.0%.
- The global energy structure is accelerating its shift towards green and low-carbon transformation, and deep decarbonization in the transportation sector has become a strategic consensus for global sustainable development. Renewable energy represented by wind and photovoltaic power is rapidly penetrating, steadily improving the cleanliness of global electricity, and laying a solid foundation for the large-scale development of new energy vehicles (NEVs). As a key vehicle for integrating energy transition with green transportation, NEVs are embracing unprecedented development opportunities. At the same time, governments around the world have successively introduced incentive policies to establish an industry support system covering multiple segments such as full vehicles, electric drive systems, power batteries, charging infrastructure and intelligent driving, thereby empowering the entire industry chain from the supply side to the application side, and continuously accelerating the global automotive industry's transition towards electrification and intelligence.

*Note: (1) Electrification rate refers to the proportion of electricity consumption to total end-use energy consumption.*

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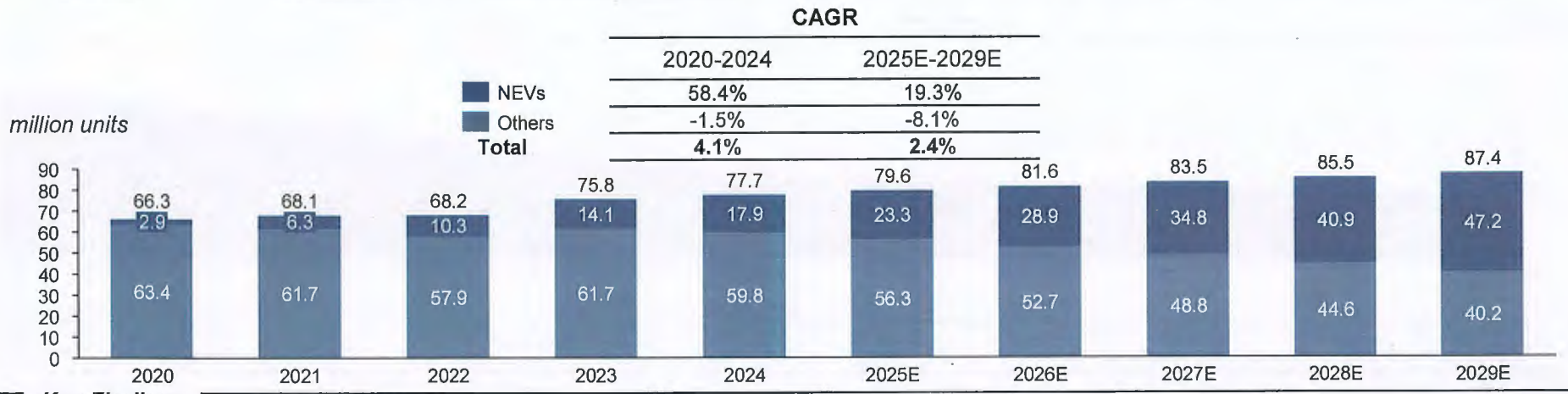
*Source: IEA, IRENA, CIC*

# Market Size of Global Passenger Vehicle

**Sales Volume of Global Passenger Vehicle, by Energy Type, 2020-2029E**




***Key Findings***

- The global automotive industry is undergoing a new round of structural transformation centered on electrification and intelligence, with NEVs, as a strategic emerging industry, accelerating the reshaping of the industry landscape. Driven by the synergy of policy guidance, technological advancement, and market demand, the global NEV market demonstrates strong momentum for vigorous growth. In 2024, global passenger vehicle sales reached 77.7 million units, of which NEV sales were 17.9 million units, with an NEV penetration rate of 23.1%. It is expected that by 2029, global passenger vehicle sales will increase to 87.4 million units, with the NEV penetration rate reaching 54.0% during the same period.
- China has consistently been one of the key markets driving the rapid development of NEVs worldwide. In 2024, China's NEV sales amounted to 12.6 million units, accounting for 70.0% of global NEV sales, making it the largest NEV market in the world. Several leading domestic brands have already established a presence in key regions such as Europe, Southeast Asia, the Middle East and South America, building comprehensive global systems encompassing products, distribution channels, branding, and localized operations.

*Notes: (1) NEVs refer to new energy passenger vehicles, including battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), and range-extended electric vehicles (REEVs). Given the relatively small volume of fuel cell vehicles in the passenger vehicle segment, they are not included in this data compilation. In this section, NEVs refer to new energy passenger vehicles.*

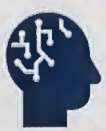
*(2) Others include internal combustion engine (ICE) vehicles and hybrid electric vehicles (HEVs).*

*(3) Certain amounts and percentage figures included in this document have been subject to rounding. Accordingly, figures shown as totals in certain tables may not be an arithmetic aggregation of the figures preceding them. Any discrepancies in any table or chart between the total shown and the sum of the amounts listed are due to rounding.*



*Source: China Passenger Car Association, CIC*

# Market Drivers of the Global NEV Industry(1/2)

| Growth drivers | |
|---|---|
|  **Intelligent development of automobiles accelerates the NEV penetration rate** | • With the rapid development of cutting-edge technologies such as artificial intelligence, big data, and 5G communications, the automotive industry is accelerating its evolution towards electrification, intelligentization and connectivity. In particular, intelligent driving systems and intelligent in-vehicle interaction technologies carried by NEVs continue to iterate and upgrade, significantly enhancing the technological added value of vehicles and the user experience. Breakthrough advancements in AI large models are driving the evolution of intelligent driving from combined driving assistance toward advanced combined driving assistance, bringing technological leaps to the industry. Meanwhile, the widespread application of Internet of Vehicles（IoV）technologies has accelerated real-time connectivity between the vehicle and people, the vehicle and infrastructure, and the vehicle and the cloud, reshaping the operational efficiency and safety boundaries of transportation systems. The rising level of intelligence continues to strengthen the advantage of NEVs as a substitute of traditional internal combustion engine vehicles, becoming a key force driving the sustained increase in global NEV penetration rate. The industry is entering a new stage of transition from "electric substitution" to "intelligent leadership." |



Source: CIC

# Market Drivers of the Global NEV Industry(2/2)

| Growth drivers | |
|---|---|
| **Development of battery technologies** | • With continuous breakthroughs in technologies such as high-voltage fast-charging batteries and solid-state batteries, the driving range, safety performance, and charging efficiency of NEVs have significantly improved, effectively alleviating user concerns about driving range anxiety and charging convenience. Meanwhile, innovations in battery material and upgrades in manufacturing processes have continuously driven cost reductions, enhancing the cost-effectiveness and market acceptance of NEVs. The gradual improvement of battery recycling and cascaded utilization systems has also laid a foundation for sustainable industry development. Driven by multiple factors, battery technologies are becoming a key engine driving the accelerated adoption of NEVs, providing solid support for vehicle manufacturers to establish long-term competitive advantages. |
| **Expansion of charging infrastructure network** | • As a crucial guarantee for the promotion and application of NEVs, charging infrastructure is undergoing rapid development toward greater network connectivity and intelligent management. The systematic deployment of public EV chargers, highway fast-charging networks and community slow-charging facilities across regions has greatly enhanced the convenience of energy replenishment for users. At the end of 2024, there were 5.5 million public EV chargers globally, of which 2.0 million were EV fast chargers. It is expected that by the end of 2029, the number of public EV chargers worldwide will increase to 31.3 million, representing a CAGR of 40.2% from 2025 to 2029, with EV fast chargers increasing to 15.9 million, accounting for 50.6% of the total. Meanwhile, with the implementation of technologies such as integrated photovoltaic-storage-charging systems, vehicle-to-grid (V2G) interaction, and intelligent scheduling, charging facilities are upgrading from "single-point energy replenishment" to "intelligent energy nodes," driving deep integration between energy systems and transportation systems. The development of charging networks has effectively resolved the "last-mile" energy replenishment challenge in user scenarios, providing a solid foundation for the sustained increase in NEV penetration rate and further consolidating the foundation for a virtuous cycle in the industry chain. |



*Source: CIC*

## Market Trends of the Global NEV Industry

**China Continues to Lead the Global NEV Market, with Intensifying Market Competition**

- Driven by favorable policies, technological accumulation, and a well-established supply chain, China has become the core growth engine of the global NEV market. Since 2024, China's share of global NEV sales has continued to rise, not only leading in scale but also advancing in product innovation, overseas expansion, and vehicle intelligence. Meanwhile, competition within the domestic market is intensifying, as leading automakers accelerate platform-based and intelligent capabilities, while mid-tier brands focus on niche segments and cost efficiency. The industry is transitioning from a policy-driven to a product-driven paradigm, with heightened market elimination and consolidation.

**Accelerated Advancement in Core "Three-Electric" Systems, E/E Architecture, and R&D Platforms**

- With the rapid expansion of the NEV market, key components such as batteries, electric motors, and electronic controls ("three-electric" systems) are undergoing rapid performance breakthroughs and cost optimizations. Technologies such as solid-state batteries, 800V high-voltage platforms, and integrated drive control units are gaining prominence. Simultaneously, electronic and electrical (E/E) vehicle architectures are shifting from distributed to centralized computing, supporting domain convergence and software-defined vehicle (SDV) paradigms. This evolution shortens development cycles, enhances hardware reusability, and drives automakers to build vertically integrated R&D platforms, raising both technological and capital barriers and accelerating industry consolidation.

**Emerging Markets Rise as Strategic Pillars for Global NEV Expansion**

- With the spillover of global NEV policies, emerging economies are accelerating the electrification of their transportation systems. Regions such as Southeast Asia, the Middle East, and Latin America have become strategic priorities for automakers' overseas expansion. Southeast Asia, in particular, benefits from low NEV penetration, rapid urbanization, and increasing policy incentives, driving robust growth in local NEV demand. Leveraging cost advantages, technological maturity, and supply chain integration, Chinese automakers are expanding local sales networks and production capacity, shifting from "product export" to "system export", and reshaping the global competitive landscape by contributing new growth frontiers.

# Impact of AI Technology Development on the NEV Market

- Artificial intelligence, as one of the most transformative general-purpose technologies today, is profoundly reshaping the product definitions, business models, and industry landscape of NEVs. In contrast to the traditional competitive logic centered on mechanical performance, AI-guided NEVs are gradually shifting towards "algorithmic capabilities" as the core driving force. From intelligent driving systems to intelligent cockpits, and from user experience to production collaboration, the widespread integration of AI not only empowers vehicles with stronger intelligent attributes but also fosters an industry evolution path from "manufacturing-driven" to "intelligence-driven." AI is becoming the foundational technological engine for the restructuring of the NEV industry chain and serves as the key force driving the industry's transition from electric substitution to intelligent transformation.

| | |
|---|---|
| 1 The development of AI large models represents a revolutionary breakthrough in the evolution of intelligent driving toward advanced levels. | • With breakthrough progress in AI technologies represented by large language models and multi-modal perception models, the intelligent driving capabilities of NEVs are entering a new stage of development. Unlike previous rule-driven, scenario-limited driver assistance systems, AI large models significantly enhance vehicles' cognitive, comprehension, and decision-making capabilities in complex traffic environments through large-scale data training and autonomous learning capabilities, driving the evolution of intelligent driving from "perception enhancement" to "cognitive closed-loop," becoming the core foundational support for achieving intelligent driving. The introduction of AI has not only reconstructed the logic of vehicle driving, but has also accelerated the transformation trend from "function-defined vehicles" to "algorithm-defined vehicles," propelling vehicle manufacturers to transition from traditional manufacturing capabilities to intelligent capabilities in competition. |
| 2 Smart cockpits represent the paradigmatic application scenario for human-machine interaction, reshaping the user in-vehicle experience. | • With AI empowerment, smart cockpits are becoming a key gateway for NEVs to enhance user experience and brand value. Through the integrated application of AI technologies such as voice recognition, natural language processing, emotion recognition, and personalized recommendations, smart cockpits have achieved a leap in human-machine interaction from "command-based control" to "conversational understanding," building an always-online, continuously learning interactive ecosystem. AI-driven cockpit systems not only break the traditional usage pattern of "humans adapting to vehicles," but also evolve towards intelligent scenarios of "vehicles understanding humans," reshaping users' functional perception and emotional connection with vehicles, and becoming an important carrier for driving the transformation of NEVs from tools to smart terminals. |
| 3 "AI + data" optimizes production processes and industry chain structure, driving an industry efficiency revolution. | • The application of AI in the NEV industry chain has extended from end products to manufacturing systems and industrial collaboration, gradually driving the industry into a new paradigm centered on "data-driven efficiency." On the production side, AI promotes intelligent optimization of key processes such as supply chain scheduling, quality control, and predictive maintenance through deep learning and data modeling, significantly enhancing production line flexibility and resource utilization efficiency. In the R&D and sales processes, AI-assisted intelligent analysis capabilities have also accelerated product iteration and market response speed. On the operational side, AI deeply integrates with real-time vehicle data, user behavior data, and operational scenarios, driving vehicle manufacturers to build user-centric full life-cycle management capabilities. Through intelligent algorithm-driven precision marketing, personalized services, and remote fault prediction, vehicle manufacturers achieve a strategic transformation from "manufacturers" to "user-oriented technology companies." The deep integration of AI and big data is expected to reconstruct the value distribution logic between vehicle manufacturers and component suppliers, driving the transformation of the NEV industry from "scale expansion-driven" to "intelligent efficiency-driven," accelerating industry chain restructuring and resource reallocation. |



*Source: CIC*

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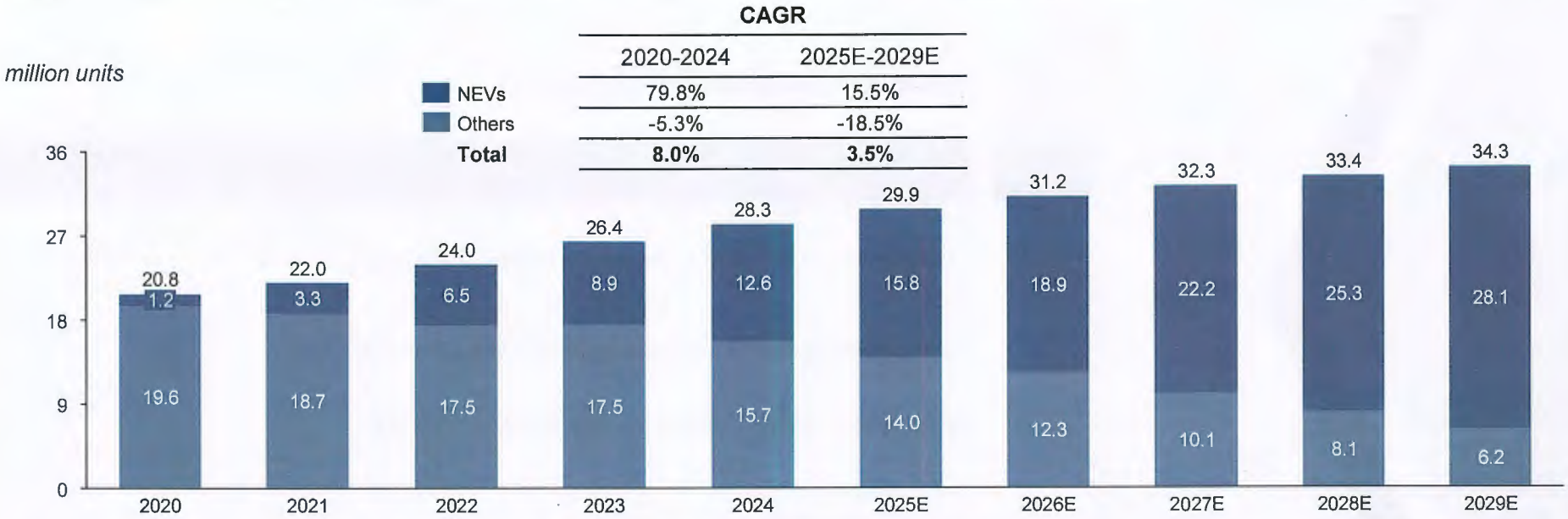
# NEVs Have Become the Core Growth Driver of China's Automotive Market

**Sales Volume of Passenger Vehicle in China, by Energy Type, 2020-2029E**




***Key Findings***

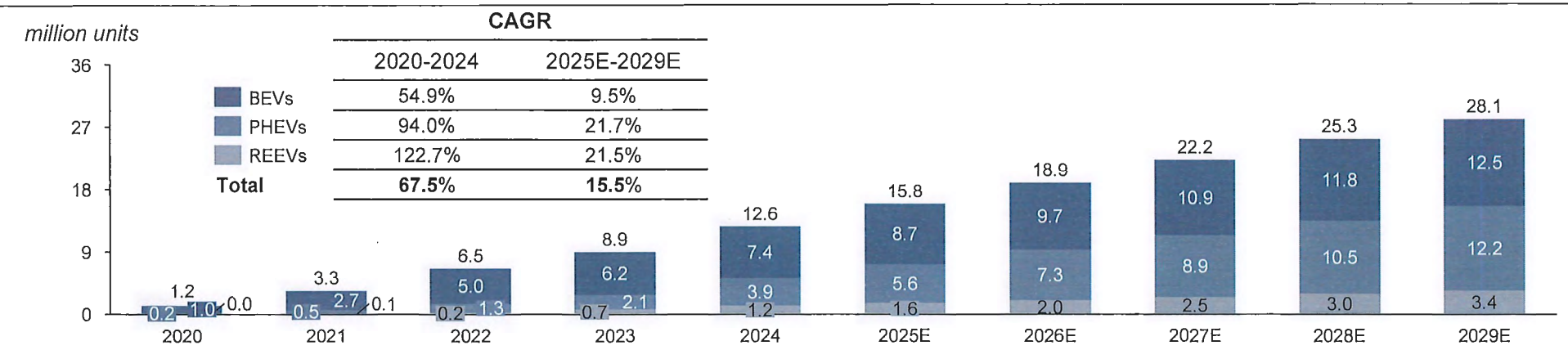
- Since 2009, China has been the world's largest passenger vehicle market. In 2024, the sales volume of passenger vehicles in China reached 28.3 million units, accounting for 36.4% of the global passenger vehicle market. It is expected that by 2029, its market size will expand to 34.3 million units, representing CAGR of 3.5% from 2025 to 2029. In recent years, the internal structure of the passenger vehicle market in China has undergone significant adjustments, with the NEV penetration rate rising rapidly from 5.8% in 2020 to 44.4% in 2024 and expected to further increase to 82.0% by 2029. This structural change has been primarily driven by continuous breakthroughs in core technologies such as batteries and intelligentization, as well as the rapid growth in consumer demand for intelligent and green mobility, collectively accelerating the substitution of traditional internal combustion engine vehicles by NEVs and making NEVs the core driving force of the passenger vehicle market growth.



*Source: China Passenger Car Association, CIC*

# BEVs Dominate the NEV Market, while PHEVs are Growing Fast, Shaping a Dual-track Market Structure

**Sales Volume of NEVs in China, by energy type, 2020-2029E**




***Penetration rate of each energy type as of NEVs***

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BEVs | 81.1% | 82.1% | 76.9% | 69.1% | 59.2% | 55.0% | 51.2% | 48.9% | 46.7% | 44.6% |
| PHEVs | 16.1% | 14.8% | 19.4% | 23.5% | 31.3% | 35.1% | 38.5% | 40.0% | 41.6% | 43.3% |
| REEVs | 2.8% | 3.1% | 3.6% | 7.4% | 9.5% | 9.9% | 10.3% | 11.1% | 11.7% | 12.1% |

***Key Findings***

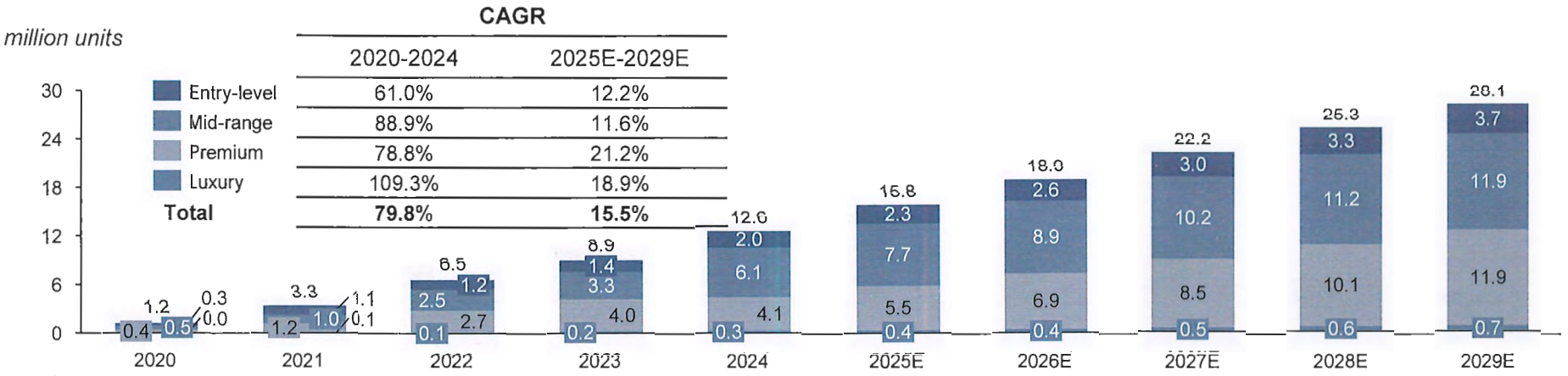
- In the NEV market in China, BEVs have consistently maintained a dominant position. In 2024, BEVs accounted for 59.2% of total NEV sales, PHEVs accounted for 31.3%, while REEVs remained a niche segment with limited market presence. By 2029, the market share of BEVs is projected to decrease to 44.6%, with PHEVs rising to 43.3%. PHEVs are expected to experience faster growth, with a CAGR of 21.7% from 2025 to 2029, significantly outpacing the 9.5% CAGR of BEVs over the same period.



*Source: China Passenger Car Association, CIC*

# Driven by High-End Consumer Experiences, NEVs Priced Between RMB 200 thousand and 500 thousand Have Become the Main Driver Supporting Industry Growth

**China's NEV Market Size, by Sales Volume, by Price Range, 2020-2029E**




| | CAGR | |
|---|---|---|
| | 2020-2024 | 2025E-2029E |
| Entry-level | 61.0% | 12.2% |
| Mid-range | 88.9% | 11.6% |
| Premium | 78.8% | 21.2% |
| Luxury | 109.3% | 18.9% |
| **Total** | **79.8%** | **15.5%** |

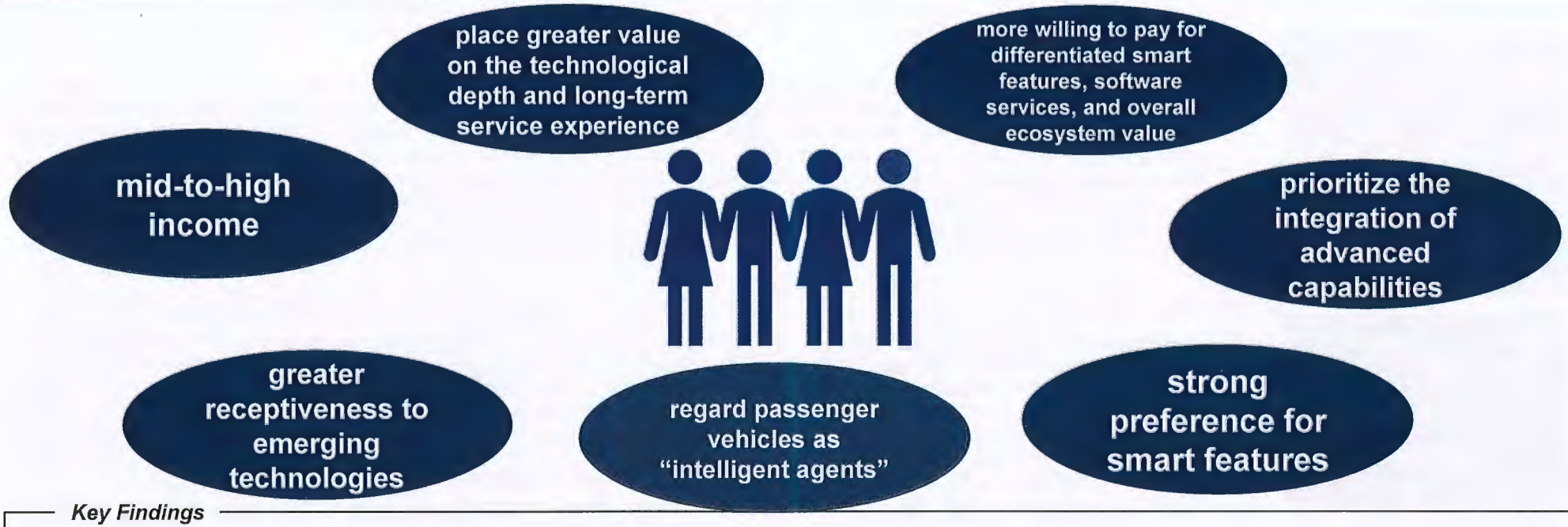
***Key Findings***

- By price range, NEVs in China can be categorized into four segments: (1) entry-level vehicles: priced below RMB100,000; (2) mid-range vehicles: priced between RMB100,000 and RMB200,000; (3) premium vehicles: priced between RMB200,000 and RMB500,000; (4) luxury vehicles: priced above RMB500,000.The pricing segmentation standards of NEVs are evolving as the industry develops and moves towards greater intelligence. It has evolved to a more nuanced framework centered on product intelligence level, service capability, and ecosystem compatibility. At the same time, the cost of advanced configurations such as smart cockpits and intelligent driving systems has decreased, driven by technological maturity and economies of scale. As a result, NEVs priced at or above RMB200,000 are now able to offer a full suite of intelligent features (i.e. highway NOA, ADAS, AI voice assistant, smart ambient lighting, etc.) that previously required a price point of over RMB300,000 just a few years ago.
- The premium and luxury vehicles are becoming the segment in China's NEV market with the highest growth potential by 2029. With the continuous expansion of the mid-to-high income population and the ongoing advancement of consumption upgrading, user demand for high-quality, intelligent, and personalized mobility has been increasing, driving a steady rise in the market penetration of premium NEV models. Meanwhile, the integrated development trend of intelligence and electrification is reshaping the value standards of premium automobiles, propelling the rapid expansion of the premium NEV market and making it a key area of competition and value concentration in the NEV industry. In 2024, sales of premium models and luxury models in China amounted to 4.1 million units and 0.3 million units, respectively, representing CAGRs of 78.8% and 109.3%, respectively, from 2020 to 2024. It is expected that by 2029, sales of premium models and luxury models in China will increase to 11.9 million units and 0.7 million units, respectively, representing CAGRs of 21.2% and 18.9%, respectively, from 2025 to 2029.



*Source: China Passenger Car Association, CIC*

## Profile Analysis of Premium NEV Consumers




***Key Findings***

- Premium NEV consumers in China are increasingly characterized by younger demographics ,as well as with a strong preference for smart features, primarily composed of mid-to-high-income groups. These consumers show greater receptiveness to emerging technologies and, during the car-buying process, prioritize not only driving range and handling performance but also the integration of advanced capabilities such as intelligent driving, cockpit interaction, perception systems, and energy management. In terms of consumer mindset, premium NEV consumers increasingly regard passenger vehicles as "intelligent agents" that blend mobility with digital functionality. As a result, they place greater value on the technological depth and long-term service experience of the vehicle, and are more willing to pay for differentiated smart features, software services, and overall ecosystem value. This trend is driving the premium NEV market toward a value system centered on technological experience and brand identity.



*Source: CIC*

# Analysis of Driving Factors in China's Premium NEV Market

**1** Domestic brands have demonstrated strong performance in combined driving assistance experience, product design, and user operations, contributing to the accelerated growth of the premium NEV market in China.

- Driven by the dual transformation of electrification and intelligentization, Chinese domestic brands have been rapidly emerging in the premium NEV segment. Leveraging multi-dimensional advantages including product capabilities, R&D response speed, intelligent experiences, and service systems, they are gradually breaking the long-standing monopoly of traditional foreign and joint venture brands in the premium market. The new generation of domestic premium brands has been continuously strengthening their premium brand image and user recognition through differentiated product positioning, exceptional smart cockpit and intelligent driving experiences, and full-process user management built upon direct sales and service networks. Meanwhile, domestic brands have achieved systematic improvements in space layout, intelligent architecture, chassis control, and complete vehicle integration efficiency, thereby establishing the technological foundation and organizational capability to rapidly derive multiple premium models and accelerating their penetration and breakthroughs in the mid-to-high end market..

**2** The shift toward a younger demographic in customer base is accelerating the demand for smart driving experiences.

- China has a large mid-to-high income population with strong consumption power, providing a solid user base for the premium NEV market. With the upgrading of consumption concepts, the demand of new-generation users for intelligent features, personalization and high-quality mobility experiences has significantly increased. Smart cockpits, intelligent driving, vehicle design esthetics and in-vehicle social functions are gradually becoming key factors influencing purchasing decisions. In particular, younger consumers, representing the new generation, have high acceptance of technological innovation and acceptance of emerging brands, and place greater emphasis on the technological advancement and experiential value of products. This shift in customer profile is expanding the target customer base of China's domestic brands in the premium NEV segment, providing strong support for achieving breakthroughs in the premium market through differentiated products and services.

**3** Smart technologies have become the new hallmark of premium NEVs.

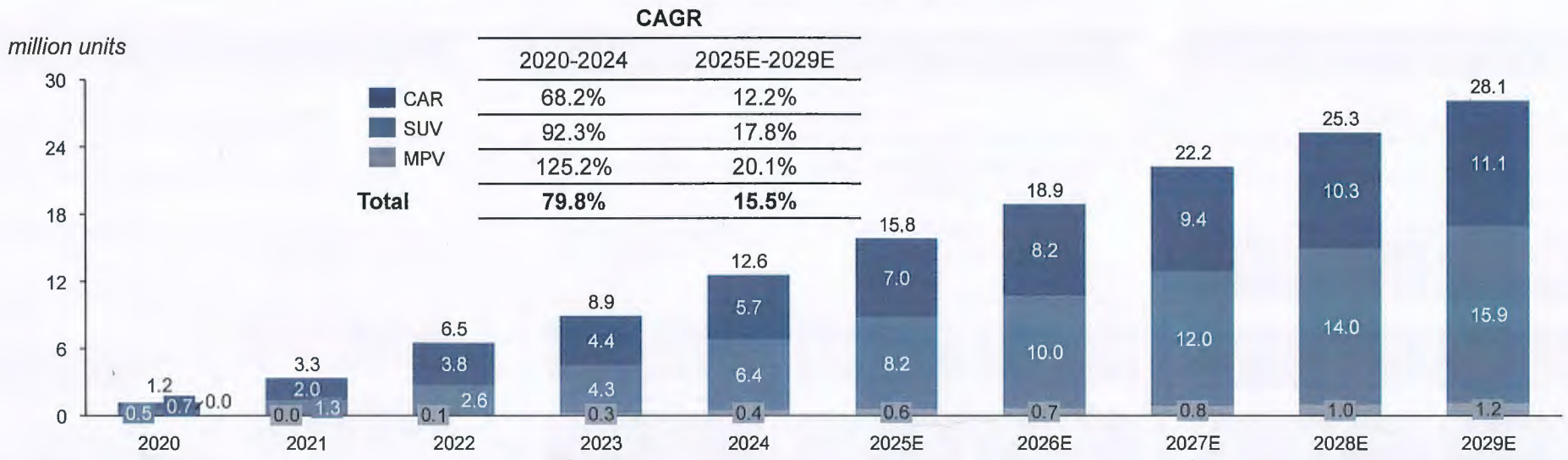
- China's domestic premium NEV brands have been continuously investing in R&D in areas such as smart cockpit interaction experiences and advanced driver assistance systems, and have already developed full in-house capabilities in technology development and rapid product commercialization. Continuous breakthroughs in key areas such as AI algorithms, in-vehicle chips, and sensor fusion have enabled domestic brands to establish differentiated advantages in competition in intelligent technologies, successfully capturing user mindshare and market opportunities. Leading intelligent capabilities not only enhance the added value of vehicles, but also serve as an important pivot for domestic brands to achieve breakthroughs in the premium market.



*Source: CIC*

# Analysis of the Sales Structure of NEV Market in China

**China's NEV Market Size, by Sales Volume, by Vehicle Type, 2020-2029E**

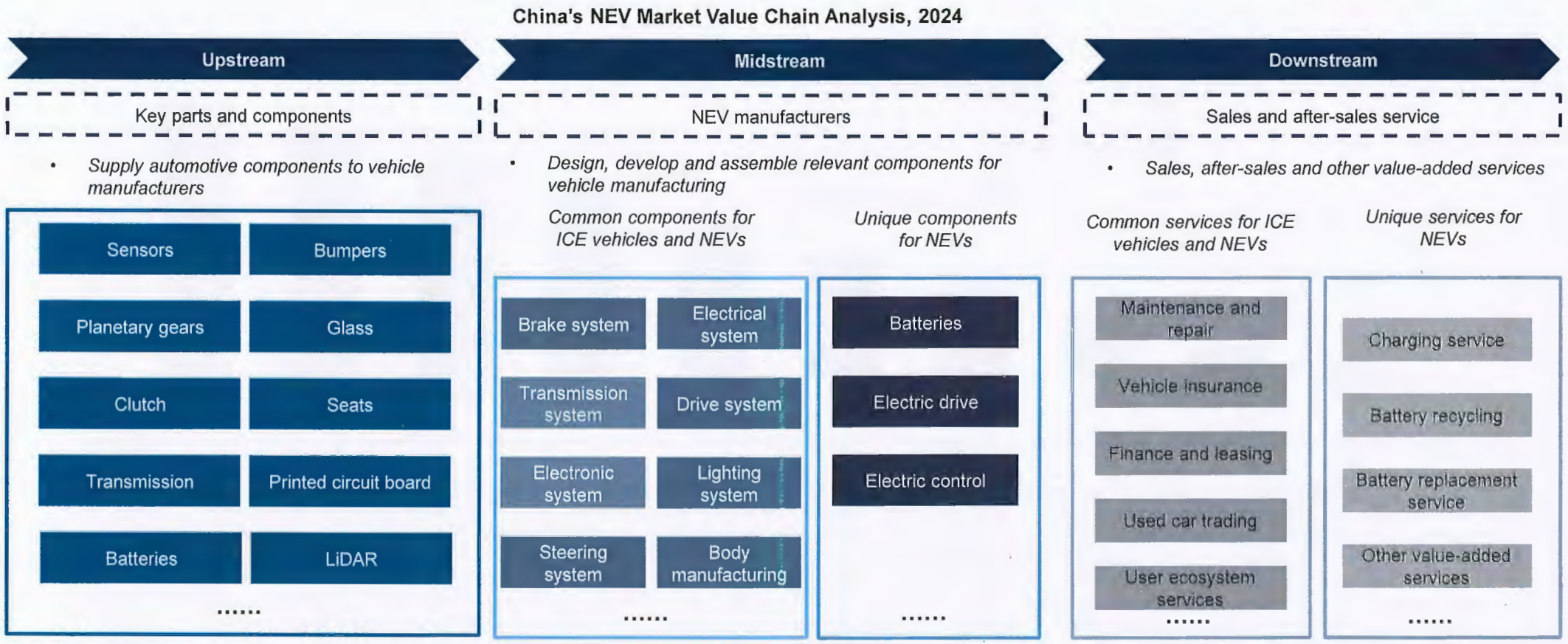



***Key Findings***

- From the perspective of vehicle type structure, new energy SUVs account for the dominant share and demonstrate significant growth momentum. In 2024, SUV sales reached 6.4 million units, accounting for 51.0% of all vehicle types, while MPV sales were 0.4 million units, accounting for 3.4%. With the trend of premiumization in NEVs, the size and design of SUVs and MPVs are better suited to embody a sense of "luxury" and technological experience, aligning with the preferences of premium consumer groups. The widespread adoption of combined driving assistance and smart features has made the advantages of SUVs and MPVs in long-distance and multi-scenario driving more apparent. In the past, sales of SUVs and MPVs were constrained by high energy consumption and limited driving range. However, with the proliferation of high-energy-density batteries and 800V high-voltage fast charging technologies, the shortcomings of electric performance are being gradually eliminated. It is expected that by 2029, SUV sales will increase to 15.9 million units, accounting for 56.3% of all vehicle types, while MPV sales will increase to 1.2 million units, with its market share rising to 4.1%.

*Source: China Passenger Car Association, CIC*

# China's NEV Market Value Chain Analysis




Source: CIC

## China's NEV Market Value Chain Analysis

### Upstream

- ✓ The NEV value chain encompasses three main segments: upstream key parts and components, midstream vehicle manufacturing, and downstream service ecosystem. The upstream segment primarily supplies key parts and components to NEV manufacturers, with its technological level and cost control directly affecting the performance and price competitiveness of vehicles. Batteries, electric drive systems and smart electronic control units represent the core differentiators of NEVs from traditional internal combustion engine vehicles, accounting for approximately 47%-55% of a vehicle's bill of materials (BOM) cost.

### Midstream

- ✓ The midstream segment comprises NEV manufacturers, which are primarily engaged in the design, R&D and manufacturing of complete vehicles. This involves not only the integration of specialized components such as power batteries, electric drive systems, intelligent electronic control units and chips, but also the matching of universal components including chassis, steering, transmission, and body manufacturing. For NEV manufacturers, continuously launching new vehicle models and achieving rapid technological iteration are the key to maintaining their competitive advantages. This places higher demands on their R&D efforts, supply chain integration, and manufacturing capabilities. Currently, only a limited number of companies are capable of achieving full-stack in-house development and scalable manufacturing capabilities.

### Downstream

- ✓ The downstream segment covers vehicle sales as well as supporting after-sales and value-added services. In addition to traditional services such as vehicle maintenance, repair, insurance, financial leasing and used vehicle trading, new services exclusive to NEVs have emerged, including charging services, battery recycling, battery swapping and user ecosystem services centered around vehicle owners, driving the extension of NEVs from a "single product" to a "full-ecosystem service."



*Source: CIC*

# Development Trends of China's NEV Market(1/2)

| Growth drivers | |
|---|---|
| **Increasingly segmented product categories to match differentiated user demand.** | • With the continuous increase in the NEV penetration rate, the Chinese market is entering a new stage of evolution from "scale-driven" to "structural optimization." User demand is shifting from basic electrification to personalized pursuits of multi-dimensional experiences in performance, space, style and functionality, driving vehicle manufacturers to continuously expand product segmentation dimensions. Multiple powertrain routes coexist, including BEV, PHEV and REEV, while vehicle structures such as sedans, SUVs and MPVs are rapidly diversifying to meet a variety of scenarios ranging from family travel, daily commuting to outdoor journeys. The continuous segmentation of product portfolios not only expands the boundaries of the target market, but also enhances vehicle manufacturers' efficiency in reaching core user groups, driving the industry from the "popularization stage" to the "deepening stage." |
| **Intelligent ecosystems and intelligent driving technologies reshape the in-vehicle experience** | • Against the backdrop of continuous breakthroughs in AI technologies and in-vehicle computing platform capabilities, smart cockpits and intelligent driving are becoming key components of NEVs' cost structure. Intelligent ecosystems leverage technologies such as voice recognition, visual perception and full-scenario connectivity to establish a new paradigm of human–vehicle interaction, significantly enhancing users' emotional connection and driving experience. Meanwhile, intelligent driving technologies are rapidly evolving from basic assistance functions to advanced intelligent driving, achieving notable progress in high-definition mapping, perception algorithms and chip process power, and are reshaping users' definition of "automobile." Intelligent features have become a key decision-making factor for new-generation users in vehicle purchasing, helping domestic brands establish new competitive advantages in technology leadership and experiential value. |
| **Domestic brands are advancing their full-chain capabilities in NEV, driving a transformation in the market landscape** | • In recent years, Chinese domestic brands have achieved a systematic leap in the NEV industry to "value-oriented." Whether in vehicle design, core three-electric systems, intelligent platforms, or user service experiences, domestic brands have demonstrated strong comprehensive competitiveness. In China's NEV market, the market share of domestic brands reached 86.7% in 2024, showing a significant upward trend compared with 76.2% in 2020. Domestic brands have been continuously increasing their market share in China's NEV market, with a number of representative mid-to-high end brands successfully entering the market segment traditionally dominated by joint venture premium brands and reshaping consumer perception through premium and intelligent product strategies. With the development of domestic premium brands, the leading advantages of traditional German, Japanese, and other joint venture premium brands in the premium NEV market are being gradually weakened, leading to a profound restructuring of the market landscape. |



*Source: CIC*

# Development Trends of China's NEV Market(2/2)

| Growth drivers | |
|---|---|
| **Chinese NEV companies actively pursue globalization strategies and gradually implement overseas expansion** | • Chinese NEV companies are accelerating the implementation of globalization strategies, with export scale and global influence further increasing. In 2020, China's NEV exports amounted to 0.3 million units, which increased to 2.0 million units in 2024, representing a CAGR of 63.7% during the period. Europe was the largest export market, accounting for 40.0% of total exports in 2024. Looking ahead, Europe will remain a key region for China's NEV exports, while regions with NEV-friendly policies and lower penetration rates such as Southeast Asia and the Middle East are expected to become new growth drivers. It is expected that by 2029, China's NEV exports will reach 6.3 million units, representing a CAGR of 22.3% from 2025 to 2029, with Europe accounting for 46.3% of exports. Through leading technologies, cost control and brand-building capabilities, Chinese NEVs are gradually establishing competitive advantages in major global markets, becoming a key engine driving China's automotive industry to achieve the transition from "large" to "strong." |
| **Comprehensive value chain integration is becoming the core competitive strength of Chinese NEV companies** | • As the market enters a high-penetration stage, the logic of competition has shifted from single-product strength to full-chain capabilities covering R&D, manufacturing, supply chain, data ecosystem and user operations. Companies possessing such capabilities can not only rapidly iterate technologies and optimize costs, but also achieve precise operations and service innovation based on vehicle data and user behaviors, creating user loyalty and long-term value returns, thereby standing out in the competition for intelligentization and premiumization. |



*Source: CIC*

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01 Overview and analysis of global and China's electric drive market

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# Definition and Classification of Smart Vehicles

**Definition**

- Smart vehicles refer to a new generation of automobiles equipped with sensing devices, computing platforms, and in-vehicle communication systems, capable of real-time perception of vehicle status and surrounding environments, path planning, and decision execution to enable automated and assisted driving. Leveraging key technologies such as artificial intelligence, automatic control, and information fusion, smart vehicles aim to enhance road safety, improve user driving experience, and accelerate the transformation of automobiles from mere transportation tools to intelligent mobility carriers.

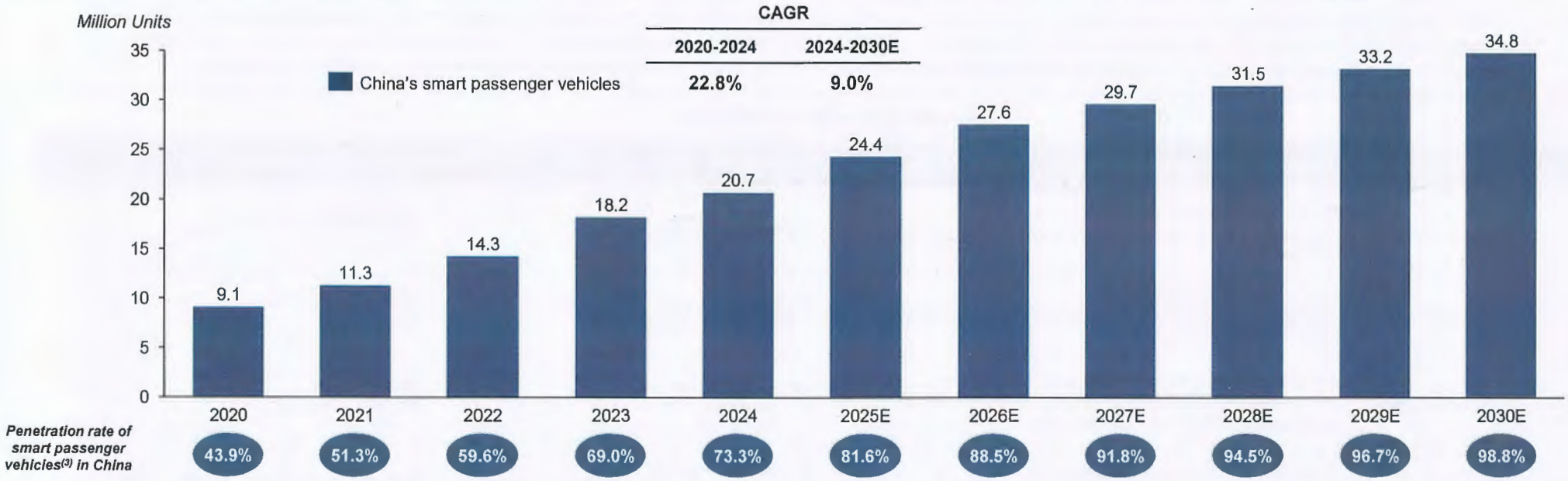
**Classification of Smart Vehicles**

| Level | System Name | Key Functional Description | Control Ownership | Driver Role | Driver Intervention Required | Typical Use Cases | Responsibility Attribution |
|---|---|---|---|---|---|---|---|
| L0 | Driver Assistance | System provides partial assistance (e.g., warnings, brief steering/braking input) but **no driving control** | Human driver | Full vehicle control | Yes | Warning systems during driving | Driver |
| L1 | Assisted Driving | Controls **either steering or acceleration/deceleration** (e.g., lane keep or adaptive cruise) | Human driver | Must continuously monitor and intervene | Yes | Highway cruise/lane assist | Driver |
| L2 | Partial Automation | Simultaneously controls **steering and acceleration/deceleration**, but driver must monitor and be ready to intervene | Human driver | Continuous supervision and readiness | Yes | Highway NOA (Navigation Assist) | Driver |
| L3 | Conditional Automation | In specific conditions, system **takes full control**, allowing hands off/eyes off, but requires **takeover upon request** | System (with fallback) | No need for constant monitoring, standby mode | No (under defined conditions) | Highway autonomous driving | System (under conditions) |
| L4 | High Automation | In defined scenarios, system has **full control**; **no human takeover needed** | System | Driver intervenes only in exceptions | No | Robotaxi, shuttle buses | System |
| L5 | Full Automation | System can drive **in all scenarios**, no steering wheel, pedals, or human required | System | No driver needed | No | Fully autonomous driving | System |

*Source: Ministry of Industry and Information Technology of The People's Republic of China, CIC*

# Sales Volume of China's Smart Passenger Vehicles

**Sales volume of China's smart passenger vehicles[1], 2020-2030E**




***Key Findings***

- With the increase in customer acceptance of intelligent functions, as well as the advancement in relevant technologies, the sales volume of smart passenger vehicles in China is expected to steadily increase from 20.7 million units in 2024 to 34.8 million units in 2030, representing a CAGR of 9.0% from 2024 to 2030.
- As a result, the penetration rate of China's smart passenger vehicles has grown from 43.9% in 2020 to 73.3% in 2024 and is projected to reach 98.8% by 2030.

*Notes:*

*(1) The sales volume of smart passenger vehicles refers to the sales volume of passenger vehicles equipped with functions of Internet of Vehicles (IoV), OTA, and driving assistance solutions (level L0-L2+).*

*(2) The penetration rate of smart passenger vehicles represents the sales volume of smart passenger vehicles as a percentage of the overall sales volume of passenger vehicles.*



*Source: CPCA, CIC*

# Future Trends of the Global and China's Smart Vehicle Market

**Continuous advancement of chip computing power has become a key force in promoting the intelligent upgrade of vehicles:** With the continuous iteration of automotive chips' computing power, smart cockpit system, as the core carrier of automotive intelligence, benefits from the redundancy in chip computing power, which furnishes a robust hardware foundation for the realization of its complex functionalities. In this context, software solution providers with strong R&D capabilities can better seize the industry development opportunities. Through close collaboration with chip manufacturers, such providers can give full play to their expertise in algorithm optimization and system adaptation, and use the redundant computing power of chips to enrich smart cockpit functions and enhance user experience, thereby further promoting the rapid development of automotive intelligence.

**Smart vehicle sector is entering a new era propelled by user service orientation:** In response to increasingly diverse consumer demands, OEMs are actively undergoing strategic transformations to elevate in-vehicle user experiences. As mobile, connected terminals, smart vehicles build digital touchpoints among OEMs, drivers and passengers, providing crucial support for user behavior analysis and service optimization. With the deepening synergy of AI and big data, in-vehicle services are becoming more intelligent and context-aware, thereby increasing crucial for OEMs in building their brand differentiation, boosting customer loyalty, and unlocking new revenue models.

**Vehicles will become the hub of the smart ecosystem, enabling interconnection of all things:** In the future, vehicles will function as critical nodes in smart mobility networks, achieving seamless connection and interaction with smart home appliances, smart wearables, smart offices, etc. In addition, through technology such as IoV (Internet of Vehicles), vehicles can communicate and interact with other vehicles, cloud servers, and road infrastructure in real time, obtaining comprehensive information of traffic, road conditions, and surrounding environment, thereby achieving more intelligent path planning, traffic flow optimization, and so forth.

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# Overview of Competition in China's NEV Electric Drive Solutions Industry

| Segment | | Characteristic |
|---|---|---|
| China's NEV Industry | Traditional OEMs | • **Brand Legacy & Strong Recognition:** OEMs have high brand awareness and strong consumer trust with a long history and a broad customer base.<br>• **Integrated Supply Chain**: OEMs manage end-to-end supply chains, ensuring quality and timely delivery while minimizing external dependency.<br>• **Holistic R&D Strength:** OEMs leverage cross-domain expertise to drive innovation and achieve better integration at the vehicle system level. |
| | NEV Brands | • **Technological Innovation**: NEV brands focus on breakthroughs in electric drive systems, battery technology, and high-voltage fast charging, enabling continuous product iteration and performance upgrades.<br>• **Intelligent Experience:** NEV brands differentiate themselves through enhanced user experience and higher perceived value by integrating intelligent driving and intelligent cockpit solutions.<br>• **Agile Organizational Structure:** NEV brands are able to accelerate product development cycles and respond swiftly to market changes with flexible and fast decision-making mechanisms. |

*The group that company belongs to.*

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*Source: CIC*

# Competitive Ranking of China's New Energy Vehicle (NEV) Industry

**Top 15 Premium NEV Brands in China, by Sales Volume, 2024 & H1 2025**

| Ranking | NEV Brand | Country | Sales volume in 2024 (10 thousand units) | Market Share | Ranking | NEV Brand | Country | Sales volume in 2025 H1 (10 thousand units) | Market Share |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Brand A | United States | 65.8 | 15.9% | 1 | Brand A | United States | 26.5 | 18.7% |
| 2 | Brand B | China | 49.3 | 11.9% | 2 | Brand B | China | 20.1 | 14.2% |
| 3 | Brand C | China | 25.2 | 6.1% | 3 | Brand G | China | 15.8 | 11.2% |
| 4 | Brand D | China | 23.5 | 5.7% | 4 | Brand C | China | 12.9 | 9.1% |
| 5 | Brand E | China | 19.3 | 4.7% | 5 | Brand D | China | 8.5 | 6.0% |
| 6 | Brand F | China | 18.3 | 4.4% | 6 | Brand E | China | 8.2 | 5.8% |
| 7 | Brand G | China | 13.7 | 3.3% | 7 | Brand H | China | 6.9 | 4.9% |
| 8 | Brand H | China | 10.6 | 2.6% | 7 | Brand L | China | 6.9 | 4.9% |
| 9 | Brand I | China | 10.0 | 2.4% | 9 | Brand F | China | 6.8 | 4.8% |
| 10 | Brand J | China | 9.0 | 2.2% | **10** | **Our Company** | **China** | **5.6** | **4.0%** |
| 11 | Brand K | China | 8.8 | 2.1% | 11 | Brand J | China | 4.9 | 3.5% |
| **12** | **Our Company** | China | **8.0** | **1.9%** | 11 | Brand O | China | 4.6 | 3.3% |
| 13 | Brand L | China | 7.5 | 1.8% | 13 | Brand P | China | 4.6 | 3.3% |
| 14 | Brand M | China | 6.4 | 1.5% | 14 | Brand K | China | 3.7 | 2.6% |
| 15 | Brand N | China | 5.7 | 1.4% | 15 | Brand Q | China | 3.6 | 2.5% |

*Notes:(1) Any discrepancies between totals and the sum of individual items are attributable to rounding.*

*Source: China Passenger Car Association, CIC*

# Competitive Ranking of China's NEV Industry (Continued)

*Notes:(2) Brand A was established in 2003 and is headquartered in Austin, Texas, the United States. It is a clean energy company focusing on electric vehicles, solar energy and energy storage systems.*

*Brand B was established in 2015 and is headquartered in Beijing, China, focusing on range-extended and battery electric intelligent vehicles. The company is dual-listed on NASDAQ and the Hong Kong Stock Exchange, primarily delivering mid- to large-sized SUVs in the Chinese market.*

*Brand C was established in 1995 and is headquartered in Shenzhen, China. It is a high-tech group with businesses covering electronics, automobiles, new energy and rail transit. The company is listed on both the Hong Kong Stock Exchange and the Shenzhen Stock Exchange.*

*Brand D commenced operations in 2021 and is headquartered in Shenzhen, China. The brand delivers range-extended and battery electric sedans and SUVs in the Chinese market.*

*Brand E was established in 2014 and is headquartered in Shanghai, China, focusing on premium intelligent electric vehicles and battery swapping ecosystems. The company is listed on the New York Stock Exchange and the Hong Kong Stock Exchange, and delivers battery electric sedans and SUVs in global markets.*

*Brand F was established in 2021 and is headquartered in Hangzhou, Zhejiang Province, China, positioning itself in the premium battery electric intelligent mobility sector. The brand currently delivers battery electric sedans and SUVs in China and selected overseas markets.*

*Brand G was established in 2010 and is headquartered in Beijing, China. It is a technology company with core businesses in smartphones, IoT ecosystems and internet services, and announced its official entry into the new energy vehicle sector in 2021.*

*Brand H was established in 2010 and is headquartered in Shenzhen, China. It operates as a joint venture and delivers battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs), including sedans and MPVs, to the China market.*

*Brand I was established in 1916 and is headquartered in Munich, Germany. The group is listed on the Frankfurt Stock Exchange and delivers multiple BEV sedans and SUVs to the China market.*

*Brand J was established in 2020 and is headquartered in Baoding, Hebei Province, China. It focuses on plug-in hybrid and range-extended technologies, delivering new energy SUVs to both the China and overseas markets.*

*Brand K was established in 2016 and is headquartered in Hangzhou, Zhejiang Province, China. Its products primarily include PHEVs and hybrid electric vehicles, with deliveries of new energy sedans and SUVs in the China and European markets.*

*Brand L was established in 2014 and is headquartered in Guangzhou, China. It focuses on intelligent BEVs, is listed on both the New York Stock Exchange and the Hong Kong Stock Exchange, and delivers BEV sedans and SUVs to the global market.*

*Brand M was established in 1937 and is headquartered in Wolfsburg, Germany. The group is listed on the Frankfurt Stock Exchange and delivers BEV sedans and SUVs to the China market.*

*Brand N was established in 2020 and is headquartered in Shanghai, China. It delivers premium BEV sedans and SUVs to the China market.*

*Brand O was jointly launched in 2023 and is headquartered in Shenzhen, China, focusing on intelligent driving BEV products. The brand has delivered battery electric sedans in the Chinese market.*

*Brand P was established in 2018 and is headquartered in Chongqing, China. Its substantial shareholder is listed on the Shenzhen Stock Exchange, and the brand delivers premium BEV SUVs and coupe SUVs in the Chinese market.*

*Brand Q was launched in Shenzhen, China in 2023, positioning itself as a personalized off-road NEV brand. The brand delivers plug-in hybrid electric SUVs in the Chinese market.*

*(3) Sales volume is calculated based on the insured volume of passenger vehicles in China published by the China Passenger Car Association.*

# Competitive Ranking of China's NEV Industry

**Top 10 Best-Selling Models in China's NEV Market, 2024 & H1 2025**

| Ranking | NEV Model | OEM-suggested retail price (RMB 10,000) | Sales volume (10 thousand units) | Ranking | NEV Model | OEM-suggested retail price (RMB 10,000) | Sales volume (10 thousand units) |
|---|---|---|---|---|---|---|---|
| 1 | BYD Song | 10.3-25.0 | 79.7 | 1 | BYD Song | 10.3-25.0 | 30.9 |
| 2 | BYD Qin | 8.0-14.0 | 72.8 | 2 | BYD Qin | 8.0-14.0 | 30.6 |
| 3 | Tesla Model Y | 26.4-33.9 | 48.1 | 3 | Geely Star Wish | 6.9-9.9 | 19.8 |
| 4 | BYD Seagull | 7.0-8.6 | 44.3 | 4 | BYD Seal | 8.0-24.0 | 17.3 |
| 5 | BYD Seal | 8.0-24.0 | 28.6 | 5 | Tesla Model Y | 26.4-33.9 | 17.2 |
| 6 | BYD Yuan | 7.5-14.8 | 27.8 | 6 | BYD Seagull | 7.0-8.6 | 17.2 |
| 7 | Hongguang Mini | 3.3-10.4 | 27.4 | 7 | Hongguang Mini | 3.3-10.4 | 16.8 |
| 8 | Wuling Bingo | 5.7-9.6 | 24.7 | 8 | Xiaomi SU7 | 21.6-30.0 | 15.6 |
| 9 | BYD Han | 16.6-28.0 | 22.2 | 9 | Li L6 | 25.0-28.0 | 9.7 |
| 10 | BYD Destroyer | 8.0-14.9 | 21.4 | 10 | Tesla Model3 | 23.6-34.0 | 9.3 |

***Key Findings***

- The overall landscape of the top 10 best-selling NEV models in China remained stable in 2024 and the first half of 2025.

*Notes: The OEM-suggested retail prices of the above models are as of the latest available date, covering all configurations and powertrain varian*

*Source: China Passenger Car Association, CIC*

# Competitive Ranking of China's NEV Industry

**Top 5 Premium NEV Brands MPV in China, by Sales Volume, 2024&2025H1**

| Ranking | NEV Brand | Sales Volume in 2024 (RMB10 thousand) | Ranking | NEV Brand | Sales Volume in 2025 H1 (RMB10 thousand) |
|---|---|---|---|---|---|
| 1 | Brand H | 8.7 | 1 | Brand H | 5.2 |
| **2** | **The Company** | **4.7** | **2** | **The Company** | **3.4** |
| 3 | Brand R | 4.7 | 3 | Brand S | 2.2 |
| 4 | Brand S | 2.3 | 4 | Brand C | 1.8 |
| 5 | Brand L | 2.1 | 5 | Brand T | 1.1 |

***Key Findings***

- In 2024, the Company's new energy MPV models achieved sales of approximately 47,000 units, ranking 2nd in the industry. In the first half of 2025, they maintained a stable performance, continuing to hold such position with sales of approximately 34,000 units.

*Notes:(1) Any discrepancies between totals and the sum of individual items are attributable to rounding.*

*(2) Brand R was launched in Guangzhou, China in 2010. Its parent company is listed on the Shanghai Stock Exchange, and the brand delivers PHEVs and BEVs in the sedan, SUV and MPV segments in the Chinese market.*

*Brand S was established in 1899 and is headquartered in Detroit, Michigan, the United States, and is one of the major brands under General Motors. The brand has launched multiple NEV models in the Chinese market, covering battery electric sedans and SUVs.*

*Brand T was established in 2016 and is headquartered in Baoding, Hebei Province, China, focusing on the mid-to-high end SUV market and specializing in PHEVs and REEVs.*



*Source: China Passenger Car Association, CIC*

# Competitive Ranking of China's NEV Industry

**Top 5 Premium NEV Brands in China, by CAGR, 2024 Q1 – 2025 Q2, 2024 Q3 – 2025 Q2**

| Ranking | NEV Brand | CAGR ( 2024 Q1 – 2025 Q2) % | Ranking | NEV Brand | CAGR (2024 Q3 – 2025 Q2) % |
|---|---|---|---|---|---|
| 1 | Brand G | 31.8% | 1 | Brand G | 27.4% |
| 2 | Brand L | 19.8% | 2 | Brand L | 23.4% |
| **3** | **The Company** | **14.4%** | 3 | Brand H | 14.7% |
| 4 | Brand H | 12.7% | **4** | **The Company** | **13.5%** |
| 5 | Brand E | 9.5% | 5 | Brand J | 6.8% |

***Key Findings***

- Among the top 15 NEV companies by sales volume, based on the quarterly compound growth rate, the Company ranked 3rd with a growth rate of 14.4% from the first quarter of 2024 to the second quarter of 2025. From the third quarter of 2024 to the second quarter of 2025, the Company achieved a growth rate of 13.5%, ranking 4th among comparable companies.

*Notes:(1) Any discrepancies between totals and the sum of individual items are attributable to rounding.*

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*Source: CPCA, CIC*

## Competitive Ranking of China's NEV Industry

**Top 5 Premium NEV Brands MPV in China, by CAGR, 2024 Q1 – 2025 Q2, 2024 Q3 – 2025 Q2**

| Ranking | NEV Brand | CAGR ( 2024 Q1 – 2025 Q2) % | Ranking | NEV Brand | CAGR (2024 Q3 – 2025 Q2) % |
|---|---|---|---|---|---|
| 1 | Brand S | 139.6% | 1 | **The Company** | **26.8%** |
| **2** | **The Company** | **21.3%** | 2 | Brand S | 11.6% |
| 3 | Brand H | 4.9% | 3 | Brand L | 10.9% |
| 4 | Brand L | -5.2% | 4 | Brand H | 5.4% |
| 5 | Brand R | -15.2% | 5 | Brand R | -23.0% |

***Key Findings***

- In the premium new energy MPV market, the Company achieved a quarterly compound growth rate of approximately 21.3% from the first quarter of 2024 to the second quarter of 2025, maintaining a leading position in the industry. Based on statistics from the third quarter of 2024 to the second quarter of 2025, the Company's growth rate further increased to 26.8%, ranking first in the market.

*Notes:(1) Any discrepancies between totals and the sum of individual items are attributable to rounding.*

*Source: CPCA, CIC*

# Competitive Ranking of China's NEV Industry

**Top 5 Premium NEV Brands in China, by CAGR of Sales Volume, 2022 - 2024**

| Ranking | NEV Brand | CAGR ( 2022 - 2024) % |
|---|---|---|
| 1 | Brand N | 246.9% |
| 2 | Brand H | 226.7% |
| **3** | **The Company** | **103.2%** |
| 4 | Brand B | 92.3% |
| 5 | Brand D | 73.6% |

***Key Findings***

- Among the top 15 new energy vehicle manufacturers by sales volume, the Company ranked third with a compound annual growth rate of 102.3% in sales from 2022 to 2024.

*Notes:(1) Any discrepancies between totals and the sum of individual items are attributable to rounding.*

*Source: CPCA, CIC*

# Competitive Ranking of China's NEV Industry

**Top 5 Premium NEV Brands in China, by CAGR of Revenue, 2022 - 2024**

| Ranking | NEV Brand | CAGR ( 2022 - 2024) % |
|---|---|---|
| 1 | Brand H | 224.9% |
| 2 | Brand N | 171.4% |
| **3** | **The Company** | **78.9%** |
| 4 | Brand B | 76.5% |
| 5 | Brand D | 68.3% |

***Key Findings***

- Among the top 15 premium new energy vehicle manufacturers by sales volume, the Company ranked third with a compound annual growth rate of 78.9% in revenue from 2022 to 2024.

*Notes:(1) Any discrepancies between totals and the sum of individual items are attributable to rounding.*

*Source: CPCA, CIC*

# Entry Barriers for China's NEV Industry

## Entry Barriers and Key Success Factors of China's NEV Industry

**High Initial Capital Requirements**

- Launching a NEV development project entails substantial upfront investment in research and development, intelligent manufacturing facilities, and brand establishment. The capital intensity creates significant financial pressure, necessitating strong funding capabilities and access to sustained financing channels, posing a considerable barrier for new entrants.

**Robust and Integrated Supply Chain Ecosystem**

- NEVs involve complex systems such as advanced electric drive units, electronic controls, and intelligent driving modules, all of which require close coordination with high-specification suppliers. Building a reliable, responsive, and integrated supply chain across key components is essential, creating a formidable challenge for new market entrants lacking supplier relationships or integration capabilities.

**Stringent NEV Manufacturing Qualification Requirements**

- According to prevailing Chinese regulations, vehicle manufacturers must obtain the Announcement on Road Motor Vehicle Manufacturers and Products. The qualification process imposes rigorous standards across technical competence, production consistency, quality assurance, and safety systems, significantly constraining the market entry timeline and scale for newcomers.

**Cost Structure and Economies of Scale**

- NEVs typically incur elevated unit production costs, and achieving profitability requires scale to dilute fixed costs. Established players benefit from economies of scale through platform-based development and bulk procurement, enabling cost advantages. New entrants face substantial cost disadvantages and margin pressures without comparable production volumes or operational scale.

# Key Success Factors of China's NEV Industry

## Entry Barriers and Key Success Factors of China's NEV Industry

| | |
|---|---|
| **Technological innovation and systematic R&D capabilities constitute the primary barrier** | • NEVs rely on continuous innovation in core components and the integration of intelligent technologies, requiring independent R&D capabilities and responsiveness to evolving roadmaps. Building user-oriented R&D systems with sustained investment in comfort, safety and intelligent interaction enhances performance and experience, while enabling product differentiation and technological moats. |
| **Comprehensive Efficiency and Financial Strength as Core Barriers to Profitability Cycles** | • The industry focus has shifted from competing solely on capital input to emphasizing the efficiency and marginal benefits of resource utilization across capital, manpower and operations. Leading vehicle manufacturers achieve rapid iteration and multi-route scale expansion with relatively limited capex by leveraging platform-based architectures, standardized tooling and flexible production lines, complemented by asset-light channels and digitalized supply chains. At the same time, refined financial management and mature credit systems enable healthy cash flows and prudent balance sheets, while diversified financing channels help continuously optimize funding costs. |
| **A stable and resilient supply chain system ensures large-scale delivery capabilities** | • The NEV industry chain is extensive, spanning battery cells, packs, drive assemblies, structural components and in-vehicle systems, which places higher requirements on supply chain integration and management. Enterprises must build strategic procurement systems for core components and secure key resources through industrial collaboration and joint development. At the same time, in light of raw material price volatility and capacity constraints, supply chain flexibility and resilience have become critical dimensions in assessing enterprise competitiveness. |
| **Brand reputation and market recognition determine the efficiency of capturing user mindshare** | • On the consumer side, brand reputation has become an important factor in consumers' vehicle purchasing decisions, especially amid increasing product homogenization and rising consumer sophistication. Enterprises need to establish consumer trust and loyalty toward their brands through precise brand positioning, differentiated product strategies, and continuous user operations, thereby enhancing market penetration rates and customer lifetime value. |



*Source: CIC*

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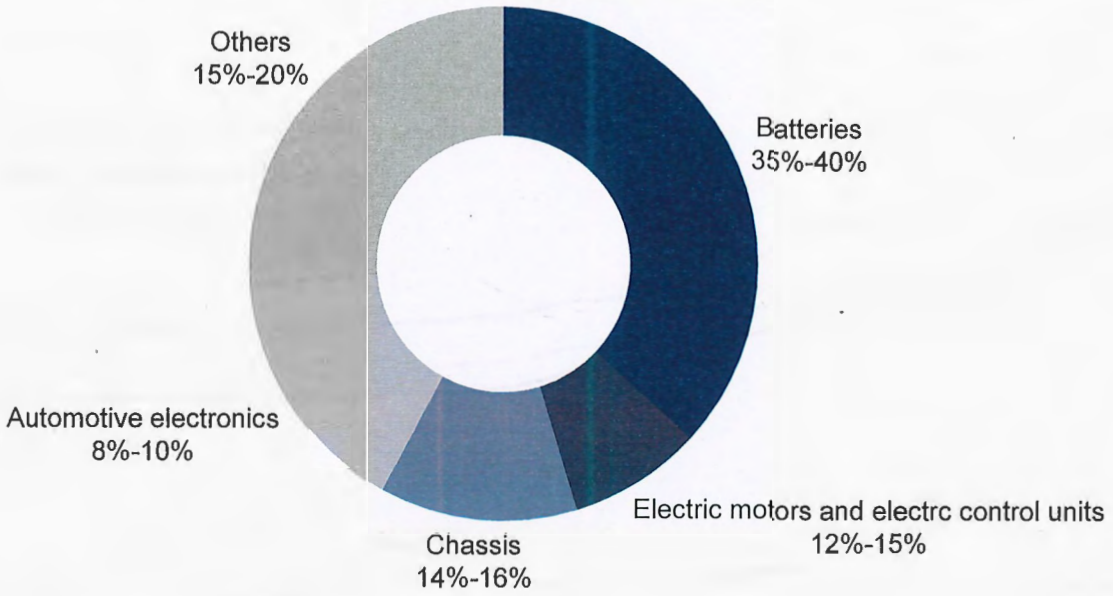
# Cost Structure of Major Raw Materials and Components for NEVs

## Cost Structure of Major Raw Materials and Component for NEVs in China, 2024




***Key Findings***

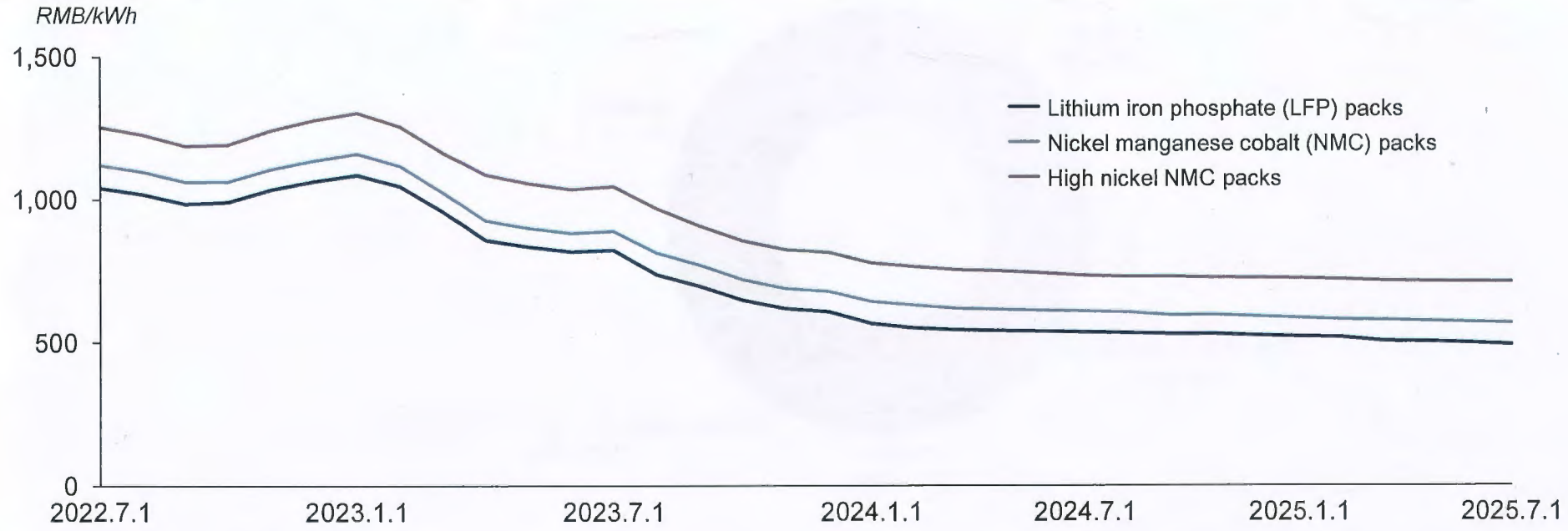
- The cost structure of NEVs is centered on the electric powertrain system, of which the power battery, electric motor and electronic control system together account for approximately 47%–55% of vehicle cost. Within this system, the power battery alone accounts for approximately 35%–40% of vehicle cost, playing a decisive role in driving range and power performance.
- The above price range reflects the industry average level, and specific figures may vary depending on vehicle type, technology route, and configuration differences.

*Notes:(3) The cost structure of others includes: body, interior, air conditioning system, lighting system, etc.*

*Source: CIC*

# Average Price Trend of Battery Packs for NEVs in China

## Average Price Trend of Battery Packs for NEVs in China, 2022.07-2025.07




***Key Findings***

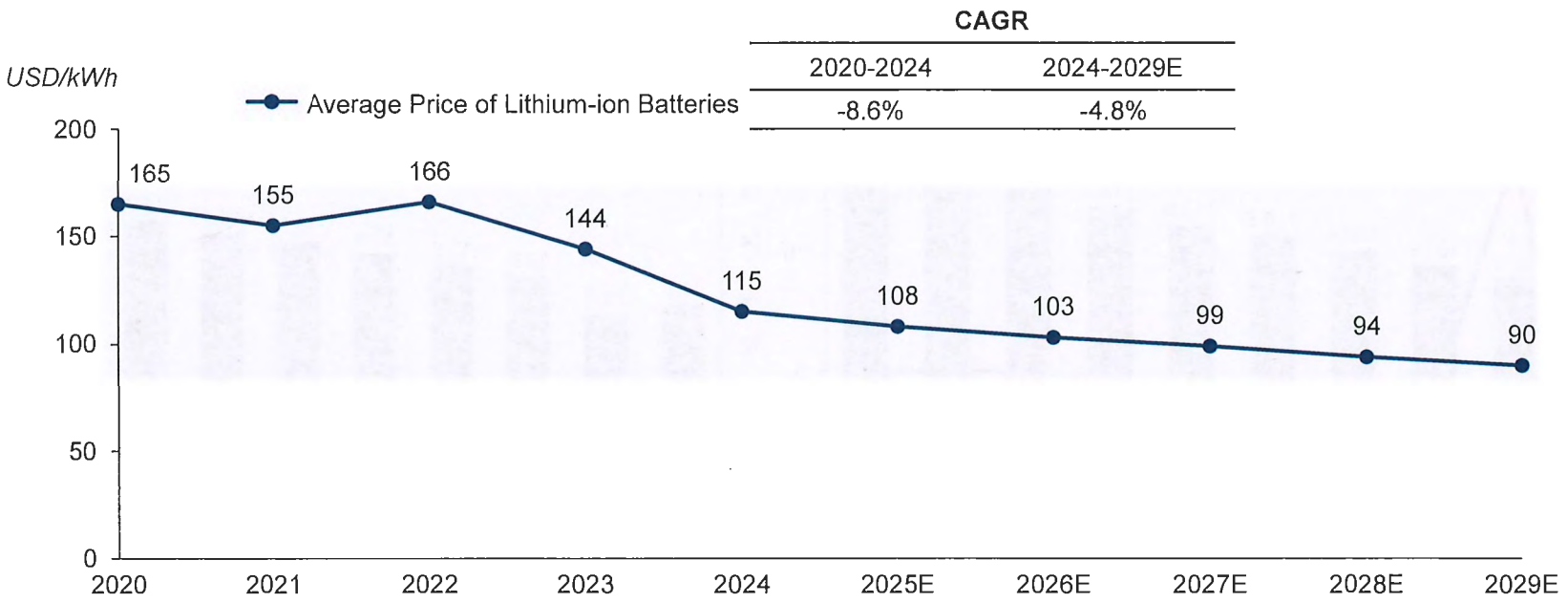
- Since 2022, battery prices in China have shown a consistent downward trend. Overall, the average price of battery packs has declined from approximately RMB 1,000–1,200 per kWh in 2022 to around RMB 500–600 per kWh by 2025. This decline not only reflects the easing of upstream raw material costs in the lithium battery supply chain, but also highlights the ongoing cost reductions driven by higher industry concentration and enhanced economies of scale in large-scale production.



*Source: CIC*

# Global Average Price Trend of Lithium-ion Battery Packs for NEVs

## Average Price Trend of Global NEV Lithium Battery Packs, 2020-2029E




***Key Findings***

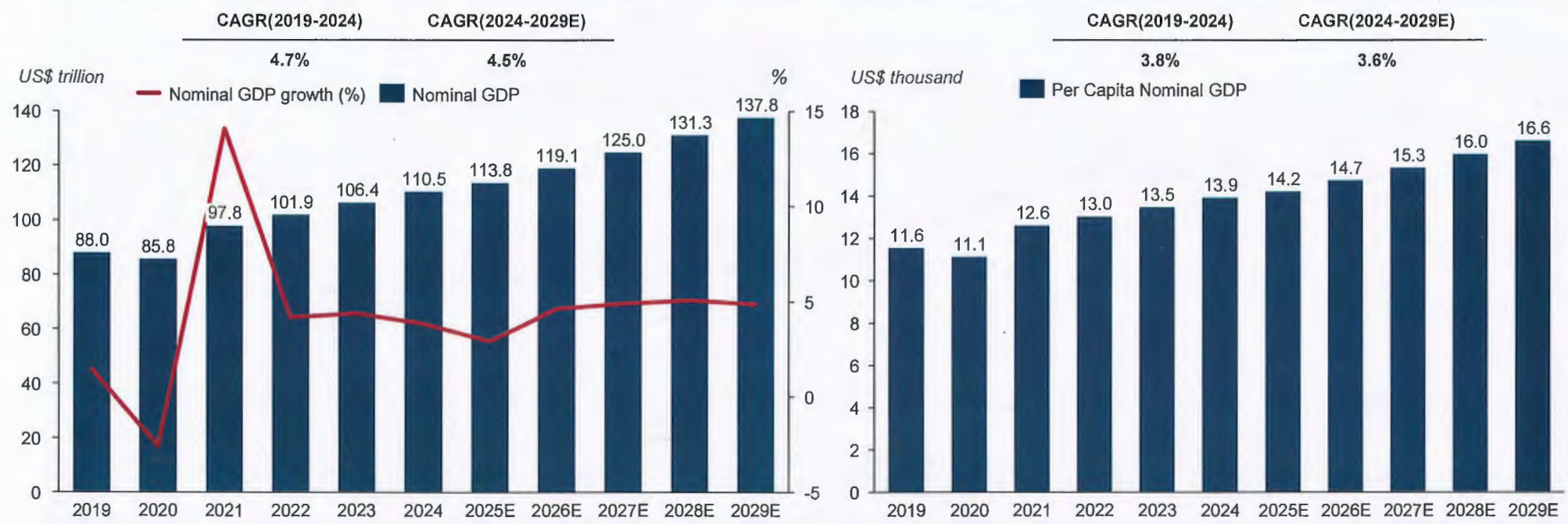
- Global NEV battery pack prices have continued to decline from US$165/kWh in 2020 to about US$115/kWh in 2024, driven by falling raw material costs, LFP penetration and economies of scale. Prices are expected to drop further to around US$108/kWh in 2025 and approach US$90/kWh by 2026–2029, accelerating NEV cost optimization, electrification penetration and advancements in battery technology and supply chains.



*Source: CIC*

# Global economy is expected to steadily grow with CAGR of 4.5% during 2024 to 2029

## Global nominal GDP and global per capita nominal GDP, 2019-2029E




***Analysis***

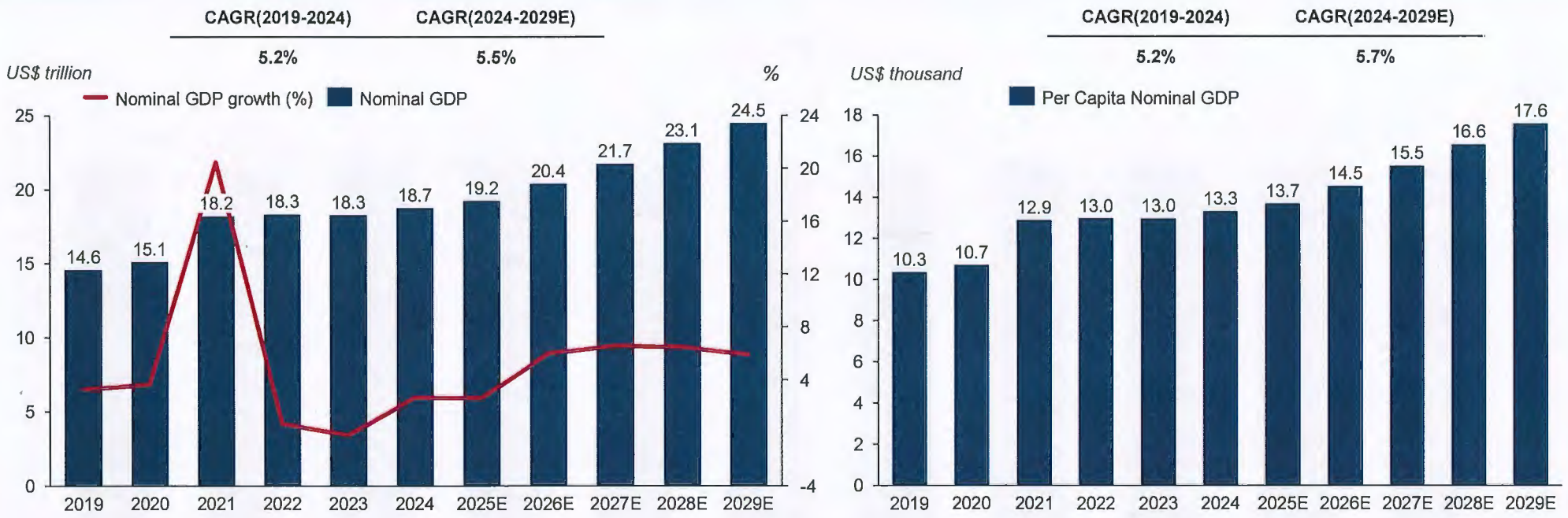
- Global economy reflected by nominal GDP had a decline in 2020 due to Covid-19, but was recovered in 2021, with its nominal GDP increasing from US$88.0 trillion in 2019 to US$97.8 trillion in 2021. Global nominal GDP is moreover expected to continue growing to reach US$137.8 trillion in 2029.
- Global per capita nominal GDP has also increased, with its increasing from US$11.6 thousand in 2019 to US$ 13.9 thousand in 2024, and is expected to grow steadily to reach US$ 16.6 thousand in 2029 with CAGR of 3.6% during 2024 to 2029.



*Source: International Monetary Fund, CIC*

# China's economy has experienced significant growth over the past several years, and its nominal GDP is expected to steadily grow with CAGR of 5.5% during 2024 to 2029

## Nominal GDP in China and China's Per Capita Nominal GDP, 2019-2029E




### *Analysis*

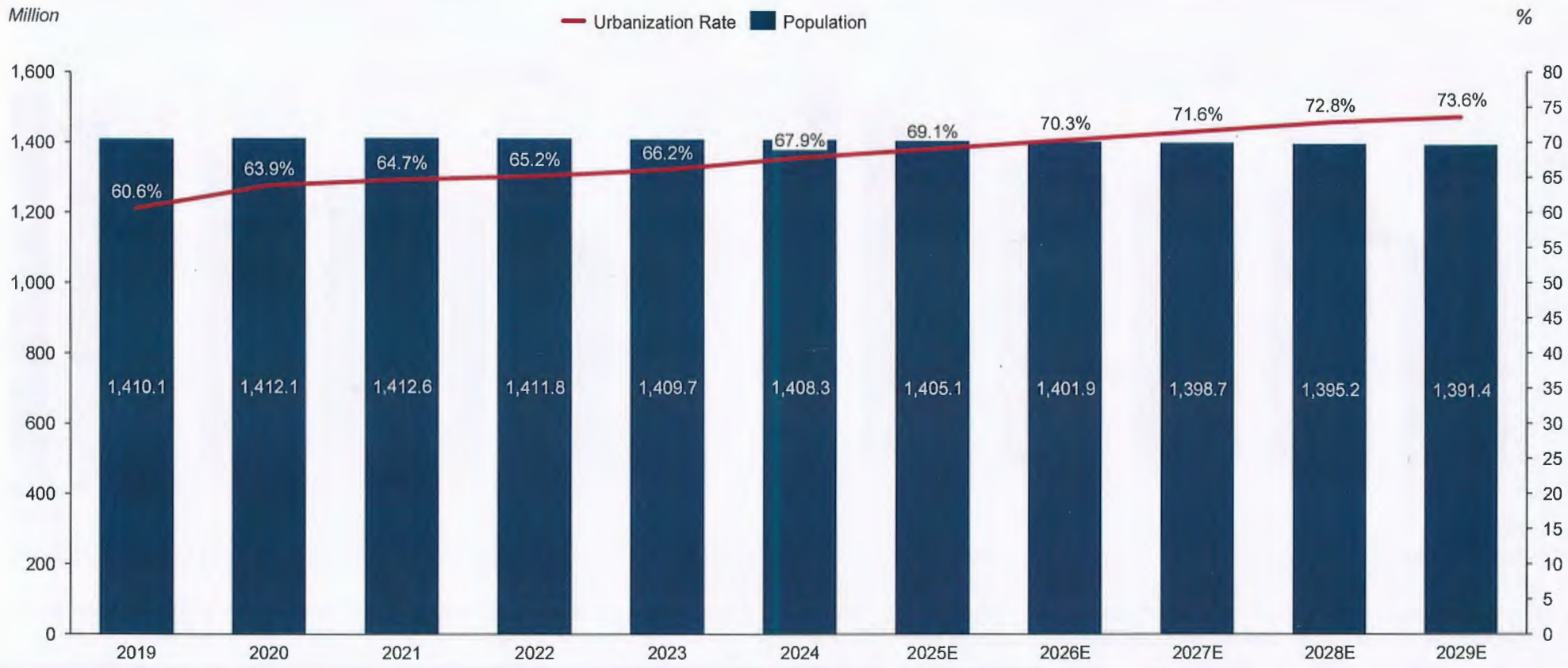
- China's economy has experienced significant growth over the past several years, with its nominal GDP increasing from US$14.6 billion in 2019 to US$18.3 billion in 2022. China's nominal GDP is moreover expected to continue growing to reach US$24.5 billion in 2029.
- China's per capita nominal GDP has also increased, with its increasing from US$10.3 thousand in 2019 to US$13.3 thousand in 2024, and is expected to grow steadily to reach US$17.6 thousand in 2029 with CAGR of5.7% during 2024 to 2029.

*Note: excluding Hong Kong, Macao, and Taiwan regions*

*Source: International Monetary Fund, CIC*

# The population of China is expected to be stable at around 1.4 billion since 2024, while the urbanization rate will increase continually, reaching 73.6% by 2028

## Population and Urbanization Rates in China, 2019-2029E

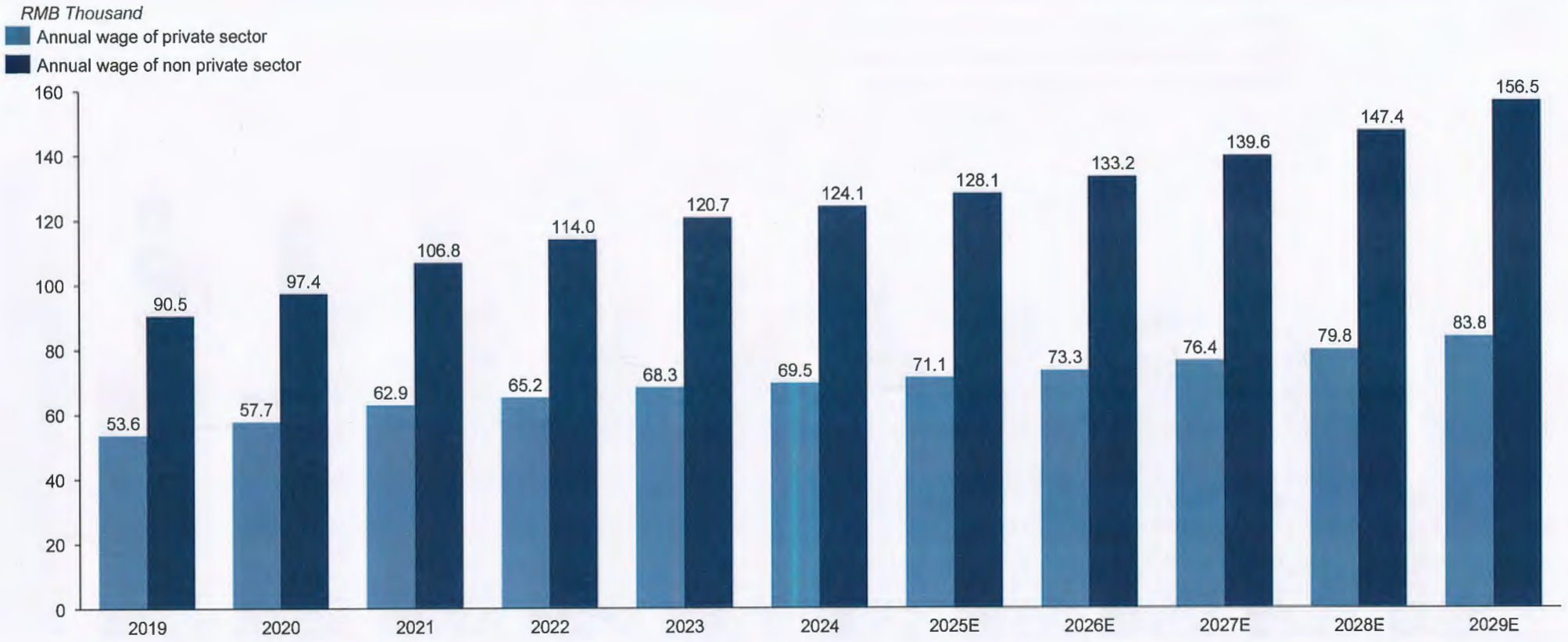



*Note: excluding Hong Kong, Macao, and Taiwan regions*

*Source: International Monetary Fund, National Bureau of Statistics of China, CIC*

# China's average wage of urban employees in private and non private sectors has increased from 2019 to 2024, and is expected to reach RMB83.8 thousand and RMB156.5 thousand respectively by 2029

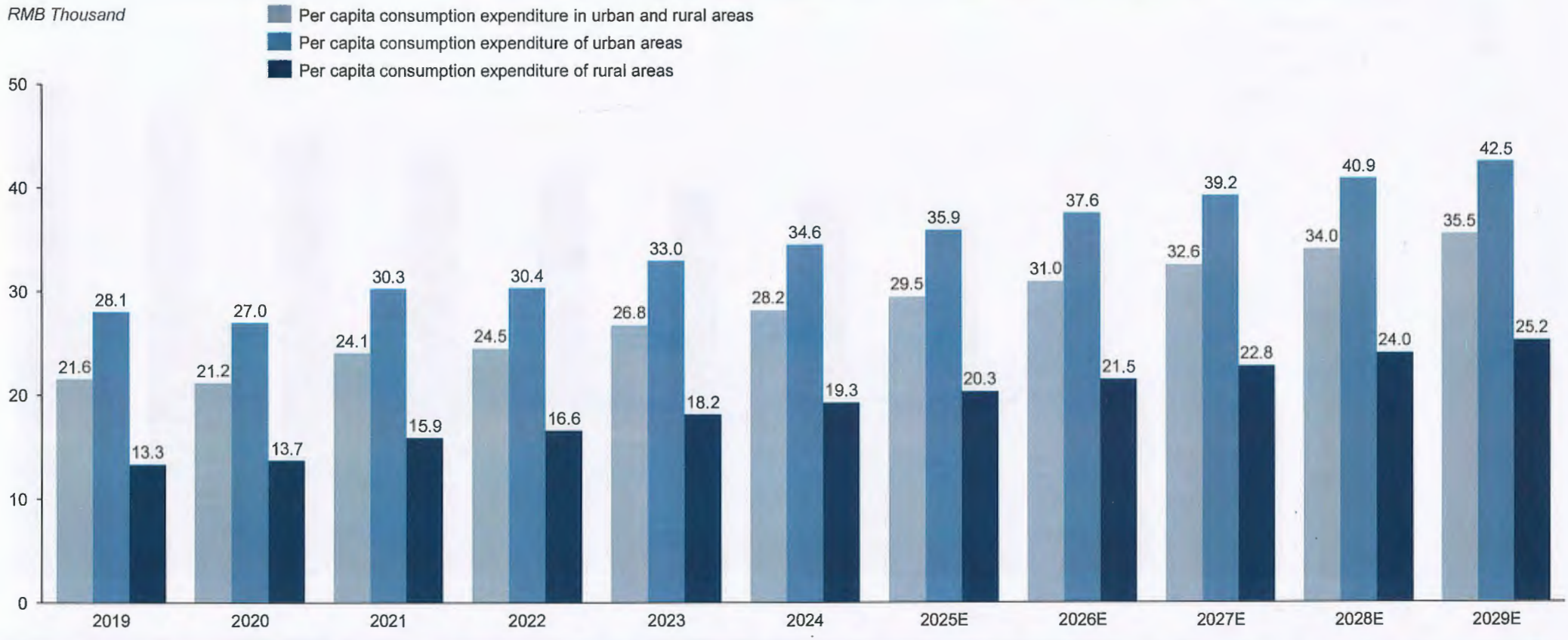
## Average Wage of Urban Employees in China, 2019-2029E




Source: National Bureau of Statistics of China, CIC

# China's per capita consumption expenditure in urban and rural areas has increased from 2019 to 2024, and is expected to reach RMB35.5 thousand in 2029

## Per Capita Consumption Expenditure in China, Urban and Rural Areas, 2019-2029E




Source: National Bureau of Statistics of China, CIC

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