

Major Automotive Global Trends of December 2024



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1. Global

Rho Motion research firm: EV sales worldwide grew in November by 32.3% compared to last year, breaking a new sales record

Global EV sales of electric and "Electrified" vehicles (including hybrids and plug-ins) jumped 32.3% in November this year to 1.83 million units, the seventh consecutive month of growth and a new monthly record, according to data published by research firm Rho Motion in December.

Sales of EVs and electrified vehicles in the Chinese auto market grew 50% in November compared to November last year, to 1.27 million units, accounting for almost 70% of global EV sales that month.

In the US and Canadian markets, 170,000 EVs were sold that month, an increase of 16.8%. Sales of EVs in the European market stood at 280,000 units, a slight decrease compared to the corresponding month but an increase of 7.7% from October. In other markets worldwide, sales in the segment were almost identical to last year's corresponding period.

The research firm says: "The Chinese EV market met growth forecasts thanks to the Chinese government's incentives, which increased sales... The penetration rate of EVs in total sales in China has been about 50% in recent months. At the same time, China's



total vehicle sales increased by 16.6% in November compared to the previous year, the highest relative increase to date".

Analysts believe that the global EV market is currently at a critical transition stage, with overproduction and rising demand for EVs in the Chinese market posing a significant challenge to markets in other parts of the world. Europe, for example, is struggling with high production costs and strict EU carbon emissions targets that make it difficult to compete with China.

Goldman Sachs: EV battery prices are expected to decline sharply and influence the penetration rate of EVs even further

According to investment bank Goldman Sachs, the average price of lithium-ion batteries for cars fell from \$153 per kWh in 2022 to \$149 per kWh in 2023 and is estimated to have fallen to \$111 per kWh by the end of 2024.

The bank also estimates that by 2026, the price will fall to only about \$80 per kWh, which would allow EVs to be produced at a similar cost by 2030 on an unsubsidized basis.

The analysts note that Chinese battery giants such as CATL and BYD have recently begun selling lithium iron phosphate (LFP) batteries at prices as low as \$56 per kWh. However, according to industry estimates, these prices reflect a localized oversupply and government subsidies and do not indicate a new price level in the long term.



The analysts note that at about \$50 per kWh, the cost of a 100 kWh battery, which usually provides an EV with a range of over 600 km, will be only about \$5,000. This is cheaper than replacing a new gasoline engine in garages in China. According to the analysts' estimates, the main reasons for the decline in battery prices are technological advances, i.e., improvements in the energy density of batteries and a decline in the prices of critical raw materials for battery production.

Raw materials such as lithium and cobalt account for almost 60% of the battery cost, and their decline in the commodity market due to increased mining and the development of new mines contributed to more than 40% of the decline.

Analysts estimate that the decline in battery prices will lead to the expansion of the use of larger batteries in EVs with a longer range while at the same time increasing the value of used EVs in the long term. In addition, as battery prices continue to fall, the costs of purchasing and using commercial EVs will decrease, and their penetration will increase even more.



2. Europe

The EU's climate commissioner: the EU does not intend to change the emission reduction targets from transportation for 2035

On December 12, the EU's climate commissioner, Wopke Hoekstra, said that despite the political pressures exerted in the background, the European Commission is not preparing to ease the target for reducing carbon dioxide emissions from vehicles in the EU, which was set about two years ago by 2035.

These comments came amid a political campaign by the European People's Party (EPP), the largest lobby group in the EU. The EPP launched the campaign with the support of car manufacturers and several European governments in an attempt to ease vehicle emissions reduction targets, primarily the immediate 2025 target.

According to the organization, the European automotive industry is currently in crisis, and tens of thousands of jobs are at risk due to falling demand, competition from China, and lower-than-expected EV sales. The organization claims that many European car manufacturers are set to miss their 2025 targets and pay huge fines as a result.

The party proposes as an alternative to calculate the average emissions of each car manufacturer over three years, from 2025 onwards. If any manufacturer fails to meet its carbon emissions



targets next year but meets them in 2026 and 2027, it could avoid fines.

According to the European Automobile Manufacturers Association (ACEA), the European automotive industry could face aggregate fines of 15 billion euros (approximately 15.8 billion US dollars) next year due to the EU's new emissions regulations. On the other hand, the EU's climate commissioner claims that the scope of the fines will be much smaller.

Business pressure among component and technology suppliers to the European automotive industry is surging, and a wave of layoffs is already in its midst

The crisis in the European automotive industry is rapidly seeping into the global supply chain, leading to significant cuts in suppliers of technology and components to the industry due to pressure from automakers on suppliers to cut costs.

In December, Germany's Bosch, the world's largest supplier of automotive components, also joined the trend. In early December, the company's vice chairman said that the company's recently announced recovery plan puts 8,000 to 10,000 jobs in Germany at risk. The company employs about 135,000 people in the country, and according to it, the layoffs will affect not only the company itself but also the entire German automotive industry.

Bosch is not the first Tier 1 supplier in Europe to announce massive layoffs. Major automotive suppliers have already announced layoffs



of more than 50,000 employees worldwide this year, including at least 20,000 in Germany and at least another 10,000 in other parts of Europe. According to the European Association of Automotive Suppliers CLEPA, suppliers in the industry have cut 86,000 jobs since 2020.

Analysts estimate that the layoffs at Tier 1 firms are concentrated in projects related to electric propulsion and software, where demand has progressed slower than expected, and the lag behind the Chinese in production volume and costs is particularly large.

3. <u>UK</u>

One-quarter of all new car sales in the UK in November were EVs, thanks to government incentives

Preliminary UK car sales figures published by the Society of Motor Manufacturers and Traders (SMMT) in December show that in November, deliveries of EVs in the UK jumped by 58.4% compared to the same month last year, and their overall market share surpassed the UK government's target.

Around a quarter of new cars delivered in the UK in November were fully electric vehicles (BEVs). This is the highest monthly share of EVs in the UK in two years. Analysts believe the surge in demand is due to the UK's policy to encourage the uptake of EVs, which has



seen massive investment in public charging infrastructure and reduced prices for consumers.

The UK government has set a target of 22% penetration of EVs this year, which is expected to grow to 80% by the end of the decade. Carmakers operating in the country face fines of up to £15,000 (about \$19,000) per vehicle if they fail to meet the targets. However, they can avoid the fines by trading "Eco-points" and by meeting targets set for later years.

In the UK, it is estimated that strong sales in the electric segment in November mean that all manufacturers will accumulate enough "Environmental points" this year so that none of them will pay the fine. However, initial data from SMMT shows that overall, the market share of the electric segment in the UK remains at about 19% this year, below the government target.

Encouraging government regulation and massive discounts on EVs have allowed the UK to overtake the average penetration rate of EVs in the EU this year, while the elimination of subsidies in Germany at the beginning of the year "Pulled" down all sales of the electric segment in Europe.



4. <u>USA</u>

Reports in the US: the Trump administration aspires to reverse its attitude towards the American auto industry, and the encouraging EV policy is making a U-turn

The US President-elect Donald Trump has appointed a team that recommended sweeping reforms in the US auto industry, including ending support for EVs and charging stations while simultaneously increasing measures against the import of vehicles, spare parts, and raw materials for batteries from China according to a document published in the US in December.

The documents reveal that the team also recommended imposing tariffs on all battery raw materials imported into the US globally, not just from China. This is to increase their own production within the US. Any international supplier wanting to receive an exemption from the tariff must negotiate separately with the administration.

During his US presidential campaign, Trump promised to repeal restrictions imposed on vehicles with internal combustion engines during the Biden era and to eliminate what he called "The electric vehicle monopoly". He also called for eliminating the \$7,500 tax credit the Biden administration granted to buyers of a new EV.

Analysts in the US point out that the new policy could harm the development, sales, and production of EVs in the US. This is precisely at a time when many traditional automakers, such as General Motors and Hyundai Motors, are expanding their offering



of electric models to the American market based on the previous administration's plans.

In addition, analysts note that the proposal to cut subsidies for EVs could also hurt sales of the American electric car giant Tesla, which has a share of almost 50% of sales in the US segment. However, Elon Musk, Tesla CEO and one of Trump's close advisers, previously said that competitors would be hurt more than Tesla if subsidies for EVs were eliminated.

According to the document, the team also advises the administration to stop funding the \$7.5 billion program to encourage the construction of charging stations, launched by the Biden administration, but not to transfer funds to encourage the construction of battery mineral processing facilities for the "US defense supply chain and critical infrastructure." The document states that batteries, minerals, and other EV parts are critical to US defense production, but private EVs and charging stations are "less important".

It should be noted that in recent years, some global automakers have moved to produce EVs in the US for the American market to meet the emissions reduction goals set by the Biden administration by the end of the decade. However, the new team proposes to ease these carbon emissions goals and also the fuel consumption reduction goals set by the outgoing administration for the auto industry. This is to allow automakers to produce more gasoline-powered vehicles.



Trump's team proposes to return the carbon emissions target to the 2019 level, which would increase average vehicle carbon emissions by about 25% compared to the carbon emissions set by the Biden administration for 2025. The average allowable fuel consumption would also increase by about 15%.

The team also proposes to prevent the state of California from independently setting stricter emissions standards. California has already asked the U.S. Environmental Protection Agency (EPA) to allow it to implement stricter emissions regulations starting in 2026, requiring all vehicles in its territory to be equipped with electric, hybrid, plug-in, or hydrogen powertrains by 2035. However, the EPA has not yet approved its request.

The team's recommendations also include imposing tariffs on products imported for the "EV supply chain," such as batteries, essential minerals. charging and components; ending environmental audits; expanding export restrictions on U.S. EV battery technologies to foreign countries; providing support for the export of U.S.-made EV batteries through the U.S. Export-Import Bank; using tariffs as a "Negotiating tool" to open foreign markets for U.S. automotive exports, including EVs; and eliminating the requirement for U.S. federal agencies to purchase EVs. This is in contrast to the current policy of the Biden administration, which stated that by the end of 2027, all cars and light trucks purchased by all U.S. federal agencies must be zero-emissions.



The bottom line is that the Biden administration has tried to strike a balance between "Promoting the construction of a domestic battery supply chain in the US to reduce dependence on China" and "Rapidly converting the American auto industry to EVs." In contrast, Trump's team plans to transfer funds currently used to build charging stations and produce affordable EVs to support US security priorities.

5. China

The government's "Swap an old polluting car with a new clean one" plan has enabled so far 5.2 million owners of old cars to purchase "Green" cars and scrape millions of old vehicles

The Chinese government's scrapping program, which began in April of 2024, has been a resounding success so far, according to data released in China in December. As part of the program, subsidies and incentives were offered to customers who agreed to replace old, polluting vehicles with "New energy" vehicles, mainly electric ones, and scrap their old vehicles.

The response was massive, and by November, no fewer than 5.2 million old vehicles had been replaced in this way. The data shows that since the start of the trade-in program, approximately 2.51 million old, polluting vehicles have already been scrapped.

Another positive side effect of the program is that it has boosted demand for cars built by the Chinese auto industry, which is a vital



force in the Chinese economy. In November, China's new vehicle production and sales reached 3.4 million and 3.3 million units, up by 11.1% and 11.7%, respectively, YOY, with most of the growth attributed to the "Trade-in" programs. In the first 11 months of the year, China's production and sales totaled about 27.9 million vehicles (private and commercial), up about 3.7% YOY and close to an all-time high.

However, analysts point out that the "Trade-in" policy promotes consumption but creates dependency, which could be problematic if and when funding is cut off. Under the original plan from April, customers who purchase a new EV instead of an old, polluting gasoline vehicle receive a subsidy of about 10,000 yuan, and those who exchange their vehicle for a less polluting gasoline vehicle are entitled to about 7,000 yuan.

On August 16, the Chinese Ministry of Commerce issued an upgrade, offering private consumers (non-fleet) who meet the requirements of the "Automobile Subsidy and Trade-in Rules" increased subsidies of 20,000 yuan for EV buyers and 15,000 yuan for new, low-emission gasoline vehicles.

According to the Commerce Department, the program's information and registration website has received more than 330 million visits so far, and the cumulative number of site users has exceeded 50 million. More than 2.3 million consumers who plan to apply for subsidies have completed full registration on the site.



Government funding for the program is set to end at the end of December. Still, many automakers and dealers have so far announced that they intend to continue it in the meantime "At their own expense" to maintain market momentum. A China Automobile Dealers Association survey shows that nearly 90% of dealers believe that the "Replace and scrap" and "Replace and upgrade" policies have been effective and have helped speed up inventory turnover and increase their profitability.

Many in China are now expecting a government announcement on extending the program. At a press conference held by the National Development and Reform Commission in December, a spokesman did indeed say that relevant bodies "Will study and propose policy measures to further increase support and expand the scope of support in the future".

Analysts: the dominance of China in Lithium-ion batteries will continue, and battery prices in the country are expected to drop

In December, the Bloomberg Research department published a new report showing China's lithium battery production dominance. According to the report, China's total battery production capacity last year was two terawatt-hours (TWh), while global demand for batteries was about 0.9 TWh. This figure indicates that China's battery production capacity alone can meet all of the world's demands. The researchers state that if the growth rate in China's battery production capacity is maintained until 2028, its production



capacity will reach 8.6 TWh, and China will maintain its global dominance in the field.

The report states that China has an absolute advantage in the entire lithium-ion battery supply chain. Its share of total global battery production is 86%, as is its share of global production of lithium-ion battery cathode materials. Its share of the global production capacity of battery anode materials is even higher, at 97%.

The monetary value of car batteries imported from China to the US in the first three quarters of this year was \$3.7 billion, compared to \$1.8 billion in the same period two years ago. According to the researchers, this figure indicates the US's critical dependence on the supply of electric and "Electrified" vehicle batteries made in China.

The report also notes the sharp decline in lithium battery prices in China, from about \$105 per kWh in 2022 to just \$54 in 2024. However, the rate of decline in the production costs of lithium-ion batteries has not matched the rate of decline in battery cell prices, and the gap between the two is narrowing. This means that the profit margins of lithium battery production in China continue to decline. Therefore, Chinese battery manufacturers have a greater incentive to seek profitable export markets overseas, which inevitably entails the establishment of production plants outside of China.

According to the report, various countries worldwide are currently adopting different methods to establish battery production in their



territories. The Biden administration, for example, has granted a series of tax breaks to battery manufacturers in the US and generous subsidies to manufacturers in the supply chain of raw materials for electrodes, battery cells, and more. Europe has also adopted legislation to increase battery production capacity in the EU to 85% of domestic battery demand by 2030.

European tariffs on Chinese EVs are having an impact: Vehicle exports from China plummeted in November

After the imposition of import tariffs on Chinese-made EVs in Europe in October, Chinese government spokespeople tried to create the impression that this was a "Light blow to the wing." However, initial export data for November reveals that the damage was much more substantial.

According to data from the China Association of Automobile Manufacturers (CAAM), in November, total exports of EVs from China fell by 10% compared to October. They amounted to about 400 thousand units, while exports of EVs fell by a sharp 40% compared to October 2023.

The bottom line is that vehicle exports from China totaled 4.33 million units in January-November, an increase of 25.5%, most of which occurred in the months before the imposition of tariffs. The data shows that vehicle exports to Israel from China surged at the highest rate among countries that comply with European



standardization, likely due to the massive wave of Chinese EV imports to Israel before the purchase tax increase in early 2025.

The decline in exports from China to Europe has not gone unnoticed by Tesla, whose Shanghai factory is responsible for most of China's car exports to Europe. Tesla's exports were cut by about 60% in November.

When presenting the data, the secretary of the China Automobile Manufacturers Association estimated that if the Chinese government and the EU reach a compromise in the negotiations on the imposition of punitive tariffs, car exports will jump back, but not at the growth rate that was in the past.

6. Thailand

Thailand is granting new incentives to locally produced "Electrified" vehicles

Thailand continues to be one of the largest and most active markets for EVs in East Asia, and in early December, the Board of Investment of Thailand (BOI) announced that the country would extend the schedule for providing incentives for the production of EVs in the country. At the same time, incentives for the purchase of electric and hybrid vehicles will be expanded to support the Thai automotive industry and make Thailand a manufacturing hub for EVs in Southeast Asia.



The council said in a press conference that Thailand has so far imported about 84,000 fully electric vehicles (BEVs) under the program and that unused funding from the first incentive program will be partially transferred to the next incentive program. According to the council, the goal is "To avoid a serious price war caused by oversupply".

Under the country's new incentive program, which went into effect this year, for every electric and "Electrified" car imported into the country in 2026, two will be manufactured in Thailand itself. This ratio will increase to three-to-one by 2027.

The measures are aimed at supporting Thailand's auto sector, which has been facing severe challenges and uncertainty about its future amid sluggish economic growth, a credit crunch, and a stagnant domestic auto market.

Thailand is Southeast Asia's second-largest economy and a major hub for vehicle assembly and exports. In recent years, Chinese companies have set up assembly plants in the country with a combined investment of more than \$1.44 billion. But despite this, Thailand's domestic auto production fell 25% year-on-year in October, the 15th consecutive month of decline, and sales fell 36% YOY.



7. <u>India</u>

Government officials in India expect strong growth of the EV market in the coming years

The EV market in India and its derivatives will reach about \$235 billion a year by 2030 and create 50 million new jobs, India's Minister of Road Transport and Highways estimated in December. The minister estimated that the EV financing market alone is expected to grow to about \$47 billion by 2030 and stressed the urgent need for India to switch to green energy. He noted that the transport sector is responsible for about 40% of India's air pollution and that India currently imports about \$25 billion worth of fuels annually, which significantly burdens the country's economy.

The minister addressed the issue of the shortage of electric buses and said that the Indian government aims to achieve a full transition to electric buses, but the current production capacity is only 50,000 per year. He encouraged domestic manufacturers to expand their manufacturing plants to meet demand and improve the quality of products.

The minister noted that the entire Indian automobile market has grown from a financial volume of \$83 billion to about \$258 billion in 2024 and is currently the third largest in the world, larger even than that of Japan. The US automobile industry is valued at \$917 billion, while China's is about \$552 billion.



8. South Korea

Political upheaval and a shaky economy have led to a decline in car sales in Korea

The Korean auto market plunged to an unprecedented level towards the end of the year due to a combination of political turmoil in government and a sharp decline in domestic consumption due to problematic macroeconomic data, including high interest rates and persistent inflation.

According to data from the Korean Automobile Manufacturers Association (KAMA), new vehicle deliveries in the country totaled 1.2 million units in the first three quarters of this year, a decrease of 8.7% compared to the same period last year. This figure represents the lowest level for the period since 2013.

Given that automakers will struggle to enjoy the traditional year-end sales momentum, the fourth quarter is also expected to remain weak compared to last year.

A senior industry source said, "The original plan was to boost sales growth and clear inventory through strong sales promotions around the end of the year, but political unrest has torpedoed the move".

Korean automakers typically launch a variety of year-end sales to reduce inventory, and customers often wait until this period to purchase vehicles at significantly lower prices.



In Korea, it is estimated that the political impasse in the country's presidency will not be resolved in the short term, and therefore, most automakers will have to make changes to their sales strategies early next year as well.

The crisis has hit foreign automakers especially hard because local companies such as Hyundai Motor and Kia can offset the decline in domestic sales by increasing exports in the Korean currency, which is currently weak, making Korean cars more accessible to customers abroad. On the other hand, the exchange rate of the local currency against the dollar increases the risk for foreign automakers because it forces them to sell more expensive vehicles in Korea.

The Korean currency has weakened rapidly following the president's martial law order in early December, which was later revoked. As a result, unionized auto workers have staged demonstrations and strikes demanding the president's resignation. In addition, unions are threatening to launch a general strike unless the president steps down. This threat has raised serious concerns about the damage to Korea's auto exports, which are critical to the local economy.



9. Israel

Year 2025 opens with an array of new taxation measures, on all vehicle categories

In December, the Israeli Tax Authority published a set of vehicle taxation measures for 2025, centered on a tax increase for all vehicle categories.

Regarding vehicles with gasoline engines, including hybrids and plug-ins, the main measure is a NIS 4,750 reduction in the green tax benefit ceiling in NIS, which stood at approximately NIS 18,000 at the end of 2024. The reduction applies to all new vehicle models in pollution groups 1 to 13, except for EVs, which will continue to receive the full green tax benefit until 2027.

Pollution groups 14 and 15, where the credit was minimal or zero until now, will now pay a "Fine" in the form of an addition to the purchase tax imposed on them, depending on the level of pollution. Vehicles in group 14 will now be subject to an additional NIS 1,535 in purchase tax. In contrast, vehicles in pollution group 15 will be subject to an additional NIS 2,455 to NIS 7,500, depending on the level of pollution. It should be noted that in addition to these steps, the green tax formula was also updated in accordance with the fixed biennial outline so that many models were placed in higher pollution groups, and therefore, the tax benefit on them was reduced.



In the EV category, the purchase tax was raised from 35% to 45%. At the same time, the tax benefit ceiling in NIS was reduced from up to 50,000 NIS in 2024 to up to only 35,000 NIS. This means that luxury and expensive EVs, for which the tax benefit is negligible, will now pay a purchase tax that is close to the maximum tax (83%) even before the imposition of the "Luxury tax", which increases the cumulative purchase tax on them to close to 90%.

In addition, the annual license fee benefit for EVs has been canceled. If in 2024 the maximum fee was about 500 NIS, now the fee is the same as that for non-electric vehicles, that is, it is based on their price, which means an average increase of about 2,000 NIS in the price of many electric models from the central segment. In addition to all these moves, vehicles will become more expensive as VAT increases from 17% to 18%.

Meanwhile, estimates are growing in the Treasury that implementing the "Mileage tax" on EVs at the beginning of 2026, as originally planned and even raised in legislation, is unrealistic.

The proposed tax, at approximately 15 cents per kilometer, was removed from the budget law in March 2024. So far, no political decision has been made in principle to implement it in January 2026. In addition, the technical preparations for its collection have not yet begun, and according to estimates, the probability that they can be completed within a few months is small. Among other things, the electronic "Gates" location was supposed to be published during



2024, where the journey will be monitored at key points. However, so far, they have not been published.

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