

# How India is accelerating its transition to a green future with EVs

► Despite the country's slow uptake of electric cars, sales are beginning to pick up



Charging an electric scooter in New Delhi. Consumers in India are increasingly becoming aware of the benefits of electric vehicles. Bloomberg

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Indian companies are accelerating their efforts to tap into the [country's move towards electric vehicles](#), as the nation strives to [bring down carbon emissions](#) and reduce its dependence on imports of fossil fuels.

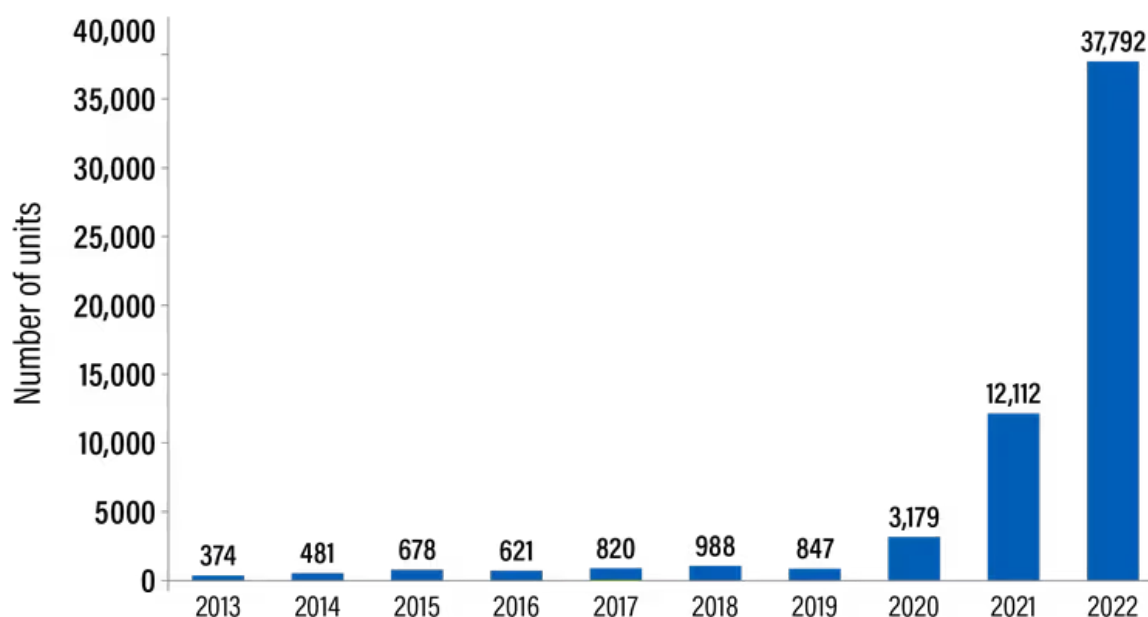
Although [India's uptake of EVs](#) has been relatively slow in the past few years due to factors including cost and a lack of charging infrastructure, [sales are picking up](#), industry experts say.

This is leading to a significant opportunity for growth as the government aims for 30 per cent of private cars to be electric by 2030, with electric scooters and mopeds already seeing enormous demand.

"We're optimistic about the future," says Ayush Lohia, chief executive of Lohia Auto, a car company that offers traditional and green mobility solutions.

"The nation's growing environmental consciousness, coupled with government incentives and infrastructure development, has fuelled a remarkable sharp rise in consumer interest."

## ANNUAL ELECTRIC FOUR-WHEELER SALES IN INDIA SINCE 2013



Source: Blackridge Research & Consulting

Annual electric four-wheeler sales in India since 2013

Electric car sales in India reached 37,792 units in 2022, up from 12,112 the previous year, according to a report by Blackridge Research & Consulting.

However, this is just a small percentage of overall car sales, which totalled 3.79 million last year, according to the Society of Indian Automobile Manufacturers.

The demand for electric mopeds and scooters has been much higher, with 622,337 electric two-wheelers sold last year in India, up from 153,523 in 2022, Blackridge's figures show.

As the UN Cop28 summit continues in Dubai, India's efforts to tackle climate change are coming into sharp focus – and transitioning to EVs is seen as an essential part of this.

At the 2021 edition of the UN conference in Glasgow, India pledged to achieve net zero carbon emissions by 2070. On Friday, Prime Minister Narendra Modi pitched for India to host the summit in 2028 and said that the country is on track to meet its national climate commitments.

But this also comes as India's capital, New Delhi, and the financial hub of Mumbai have been affected by a surge in air pollution in recent weeks, drawing attention to the potential benefits of EVs.

"The deteriorating air quality in Delhi NCR [National Capital Region], Mumbai and several other cities across the country underscores the urgent need to accelerate EV adoption," says Shailesh Chandra, managing director of Tata Motors Passenger Vehicles and Tata Passenger Electric Mobility.

Tata Motors is the biggest seller of electric cars in India, with an 80 per cent share of the market, according to Blackridge.

Research shows that despite concerns about running out of charge and the expense, consumers are warming up to electric cars.

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A recent report by McKinsey revealed that 70 per cent of consumers in India's major cities said they were willing to consider an electric car for their next vehicle purchase.

"EV market penetration is projected to grow to 10 per cent to 15 per cent by 2030, creating a significant opportunity for manufacturers, financial institutions, grid operators and other stakeholders," the report states.

India's push for EVs has generated several start-ups as entrepreneurs offer solutions to the industry's challenges.

One example is Raptee, an electric motorcycle start-up founded by four engineers from Chennai.

It plans to start production by the end of the first quarter of 2024.

"While the current challenges in India's EV market, like the charging infrastructure, range anxiety and initial costs, might be roadblocks, the good news is that people are increasingly becoming aware of the benefits of electric vehicles," says Dinesh Arjun, chief executive and co-founder of Raptee Energy.

"As awareness grows, so does the demand for solutions. Governments and private entities are likely to respond with increased investments in charging infrastructure, and as technology advances, the cost of EVs is expected to come down."

Companies operating in the electric two-wheeler segment for several years, such as Ather Energy, are already reaping the rewards.

**Watch: UAE-made Rabdan One EV takes centre stage at Adipee**

## UAE-made Rabdan One electric vehicle takes centre stage at Adipeec



“We recently commissioned our second manufacturing facility,” says Ravneet Phokela, chief business officer at Ather Energy, which was set up in 2013.

“Our annual capacity is 400,000 units per annum – a significant jump from our earlier capacity of 120,000 units. EVs are going mainstream.”

Government initiatives are playing “a pivotal role”, Mr Phokela says, with the Indian government offering subsidies, incentives, and tax benefits to manufacturers and consumers to promote EV production and adoption.

This is helping to drive investor appetite for the segment.

“The EV sector is becoming a growing area of interest for investors, both in India and globally,” says Manoj Kumar Agarwal, co-founder and managing partner at Seafund, a venture capital firm based in Bengaluru.

“Some of the factors that make the EV sector attractive to investors are incentives being offered by the government, toughening emission laws, rising fuel costs, increasing awareness of climate issues and increasing global focus on environmental issues and green energy.”

Electric two-wheelers are relatively affordable for consumers in India, helped by government incentives. They are also a popular option because they are cheaper to run than petrol models.

“This dual motivation, driven by economic savings and environmental consciousness, contributes significantly to the increasing adoption of EVs in India,” says Hari Kiran, co-founder and chief operating officer at eBikeGo.



But when it comes to cars, there are still a limited number of models available in India, and they are much more expensive to buy than combustion engine vehicles.

Despite the growth that is taking place and the robust demand for electric two-wheelers, analysts say that India is one of the countries where the transition to electric cars is lagging behind other economies.



While EVs are initially more expensive, the trajectory of reducing lithium-ion battery costs is evident

**Pankaj Sharma, co-founder and director at Log9 Materials**

“The EV transition remains a challenge for many emerging and developing economies including Brazil, South Africa and India,” according to a report by Euromonitor released last week.

“All three countries ranked at the bottom of the 2023 index as limited government incentives, low incomes and the undersupply of public charging stations have discouraged businesses and consumers from making the transition.”

India is investing in charging infrastructure. But while China has some 1.8 million public charging stations, India, as of the end of July, had just 9,113 public EV stations. This is despite India overtaking China to become the world's most populous nation this year.

“The Indian market stands at the forefront of a crucial juncture, necessitating substantial investments in charging infrastructure,” says Bharath Rao, co-founder and chief executive of Emobi, a Bengaluru-based EV start-up.

He says that along with this hurdle, “a pivotal aspect demanding attention is the accessibility to finance”

“Ensuring easy access to funds for end consumers and operators is paramount, fostering the purchase and adoption of electric vehicles.”

The Climate Finance Leadership Initiative (CFLI) India and Michael R Bloomberg unveiled climate finance solutions that could mobilise more than \$6.5 billion to support India in tackling climate change.

CFLI member Tata Motors announced partnerships with Indian lenders, including HDFC, HSBC India, and State Bank of India, to offer good-value loans and leasing solutions for EVs.

Another development that could help boost the industry is a reduction in the cost of batteries used in EVs. As the single most expensive component – due to heavy dependence on imports for India – a fall in costs could bring down the cost of production and retail price of EVs.

To increase domestic production, the Indian government has been offering incentives for battery cell production.

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“While EVs are initially more expensive, the trajectory of reducing lithium-ion battery costs is evident,” says Pankaj Sharma, co-founder and director at Log9 Materials, a Bengaluru nano-technology company that makes battery packs for EVs.

“The 25 to 30 per cent price difference between electric and internal combustion engine vehicles is expected to narrow as technology matures and mass production scales up.”

As the roadblocks are reduced and given the growth potential, foreign car makers are increasingly eyeing India's EV market.

Elon Musk has long been pushing Tesla to sell its vehicles in India. Last month, the *Economic Times* newspaper reported that Tesla is prepared to invest up to \$2 billion to set up a factory in India, provided the government meets certain conditions.

Such a move would only further boost a market already on a solid growth path.

“I'm sure with continued government support, growing market demand and expanding infrastructure, India can achieve its target of 30 per cent EV penetration by 2030,” says Mr Lohia.

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