

# THE INDIAN TWO-WHEELER MARKET CHARGES TO SUSTAINABILITY



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Market developments in India point to rapid electrification of the two-wheeler vehicle parc. In this article, we explain why this is occurring and what it means for the motorcycle oil (MCO) market, in addition to providing additional insights and data about the market.

The Indian lubricants market is the third-largest in the world. MCOs, the third-largest product category following process oils and heavy-duty motor oils (HDMOs), account for 9% of total demand. The MCO lubricants product category was one of the least impacted by the COVID-19 pandemic and was also one of the fastest to recover. According to estimates, the MCO market is growing at a 3.7% rate per year, making it one of the most attractive product segments for lubricants marketers. Increasing electrification will create new challenges for market participants.



# Two-wheelers are the mainstay of personal mobility in India

Two-wheelers are one of the most important and easiest modes of transportation in both urban and rural India. Motorcycles are the most popular type of two-wheelers, followed by scooters and mopeds. While the share of mopeds in the two-wheeler parc is shrinking, the share of scooters is growing rapidly. In India, the majority of two-wheeler owners use their vehicles to commute to their place of work. Business activities represent the second-largest application in the two-wheeler market, with food and goods delivery services, as well as mail and courier services, extensively utilizing two-wheelers. They are additionally used as bike taxis and self-drive rentals — a growing business segment in India. There also exists a niche market that uses two-wheelers primarily for recreational purposes.

Due to the importance of two-wheelers for personal mobility in India, the country is the largest market for these vehicles in terms of sales and population. Two-wheelers dominate automotive sales, representing more than 80% of annual sales across the personal-mobility and heavy-duty-vehicles market. Leading two-wheeler original equipment manufacturers (OEMs) include Hero MotoCorp, Honda, TVS, Bajaj, Suzuki, Royal Enfield, Yamaha, Mahindra, and Vespa. Among the brands operating primarily in the premium two-wheeler market are Kawasaki, Harley Davidson, Triumph, BMW, Indian Motorcycle, and KTM.



# Electric two-wheelers are gaining ground

Support from the Indian government has been pivotal in pushing the sales of electric two-wheelers. Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) is a scheme to promote electric vehicle (EV) adoption in the country. The first phase of FAME, which operated from FY 2015-2016 to FY 2018-2019 supported slow- and high-speed electric two-wheelers. However, the second phase, running from FY 2019-2020 to FY 2021-2022, has a budget outlay to incentivize the purchase of a million high-speed electric two-wheelers that use batteries with advanced chemistry. Due to increased technical specifications in the second phase of FAME, the incentivization has resulted in only approximately 10% of electric two-wheelers sold to date during this period. This has translated into the utilization of only approximately 5% of the budgeted outlay, even as two-thirds of the scheme period has elapsed.

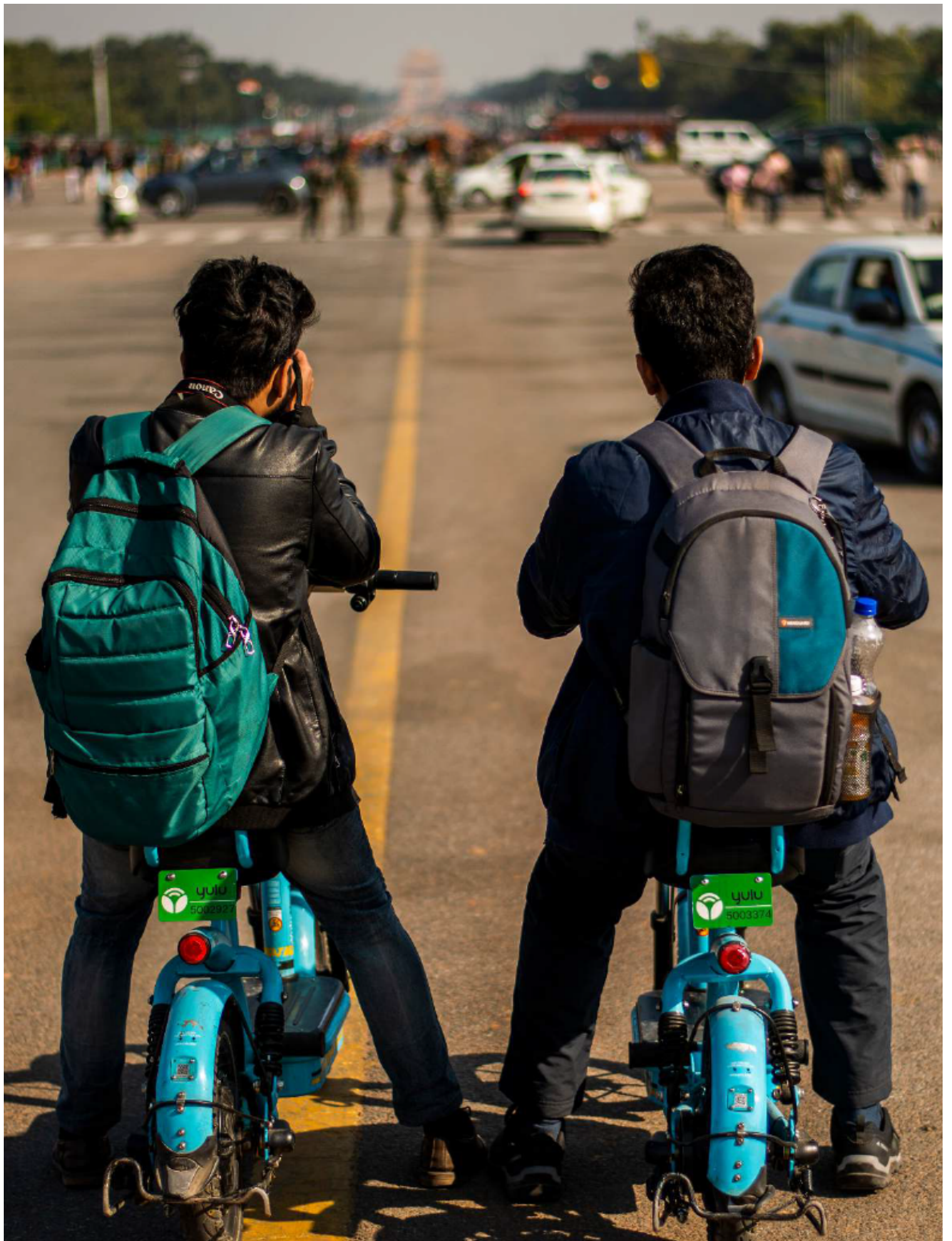
In June 2019, the Indian government proposed banning the sale of two-wheelers under 150cc cylinder capacity after March 2025 and only allowing electric two-wheelers to be purchased following this date, as part of its bid to promote a rapid transition toward electric mobility in India. Sales of motorcycles that are under 150cc cylinder capacity account for just under 100% of market-leader Hero MotoCorp's two-wheeler sales and represent 83% of Bajaj's sales. If this ban were to proceed, these OEMs would be forced to electrify.

The Indian government slashed goods and service tax (GST) on EVs — from 12% to 5% — in July 2019 to promote EVs in the country; this translated into a price reduction of USD 110-137 (INR 8,000-10,000). GST was also slashed on EV chargers — from 18% to 5% — in 2019. Another step taken by the government to make EVs even more affordable for the Indian consumer included an income tax deduction of USD 0.02 million (INR 1.5 million) on the interest paid on loans taken to purchase EVs. Additionally, low-speed electric two-wheelers are exempt from registration. Several state governments in India have offered waivers on road tax and registration fees for electric two-wheelers.

Helped by all these measures, sales of electric scooters have been growing rapidly despite the decline caused by the COVID-19 pandemic in 2020-2021.

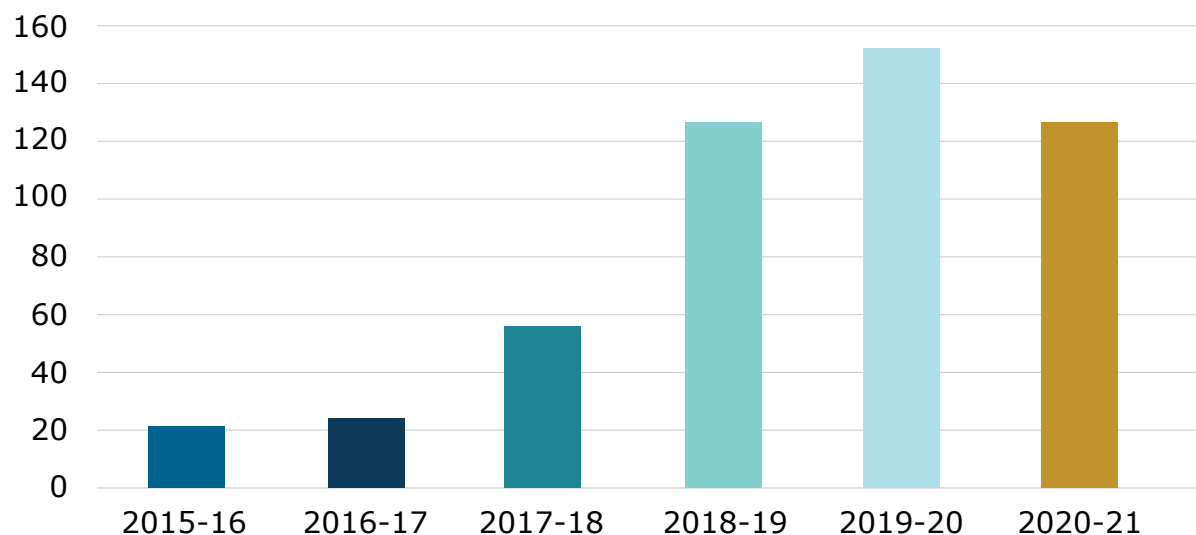
Encouraged by the growth from the favorable tax and regulatory environment and the increased sales, many OEMs have announced plans to expand their production capacity.





## Electric Two-wheeler Sales In India

Thousan units



Source: Society of Manufacturers of Electric Vehicles (SMEV), Kline estimates.

## Electric Two-wheeler Capacity And Expansion Plans Of Select OEM's

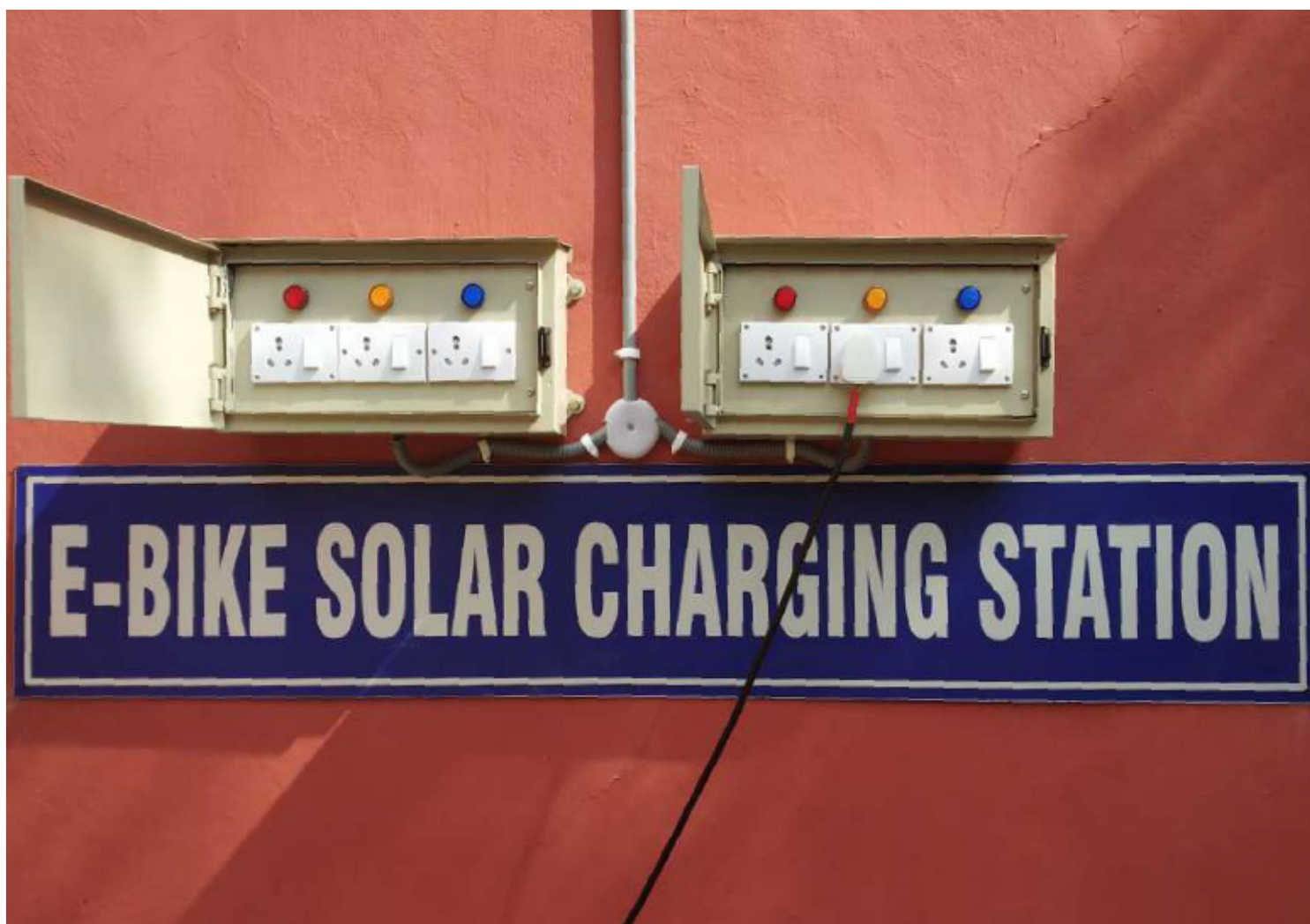
OEM	CURRENT CAPACITY	EXPANSION PLANS
Hero Electric	70,000-100,000 units	500,000 units
Ather Energy	110,000 units	400,000-500,000 units
Okinawa Autotech	90,000 units	500,000 units
Ampere Electric	100,000 units (by end of 2021)	1,000,000 units (over 10 years)
Revolt Intellicorp	120,000 units	-
Ola Electric Mobility	-	10,000,000 units (by 2022)
Detel	-	100,000 units

Note: Bajaj and TVS (leading two-wheeler OEMs) manufacture electric two-wheelers, but do not have dedicated facilities.

Source: News articles.









# India's electric-vehicle charging strategy is ambitious

Among the oft-cited issues with EV growth in India are the poor electricity grid infrastructure and paucity of charging stations. Many power companies, as well as oil companies, have announced plans to develop charging infrastructures in the country. The Indian government plans to make battery-swapping a key component of electric two-wheeler charging, simultaneously addressing two issues — the lack of charge points and the long charging time. In August 2020, the Ministry of Road Transport and Highways announced that it would allow the sale and registration of EVs without batteries. This is the latest in a series of Indian government policies that signal favoring battery swapping, and it has led to a growing roster of startups in this space.





## Electric Two-wheeler Capacity And Expansion Plans Of Select OEM's

STARTUP	COMPANY BACKGROUND/FOCUS
	Claims to be largest "Battery as a service" provider in India. Focus on setting up battery swamping stations in NCR
	Provide battery swamping service along with other data services and telematics for autorickshaws and two-wheelers.
	Provide battery swamping service along with charging solutions, battery analytics, and fleet management
	Digital SaaS Platform For Energy Deliver To EVs
	Provide battery swamping service to e-Rickshaws
	Raid-hailing service offering battery swamping service
	Provides charging stations and battery swamping service
	Battery swamping stations and swappable batteries

Even OEMs, oil companies, and e-commerce companies are entering this arena. Four two-wheeler OEMs — Honda, KTM, Piaggio, and Yamaha — have formed a consortium for swappable batteries . Jio-bp, the mobility joint venture between Reliance Industries and BP, is conducting a pilot program for battery swapping for electric autorickshaws, and has larger plans in this area . Zipp Electric has partnered with grocery, e-retail, and food tech companies such as BigBasket, Grofers, Modern Bazaar, and Spencers.

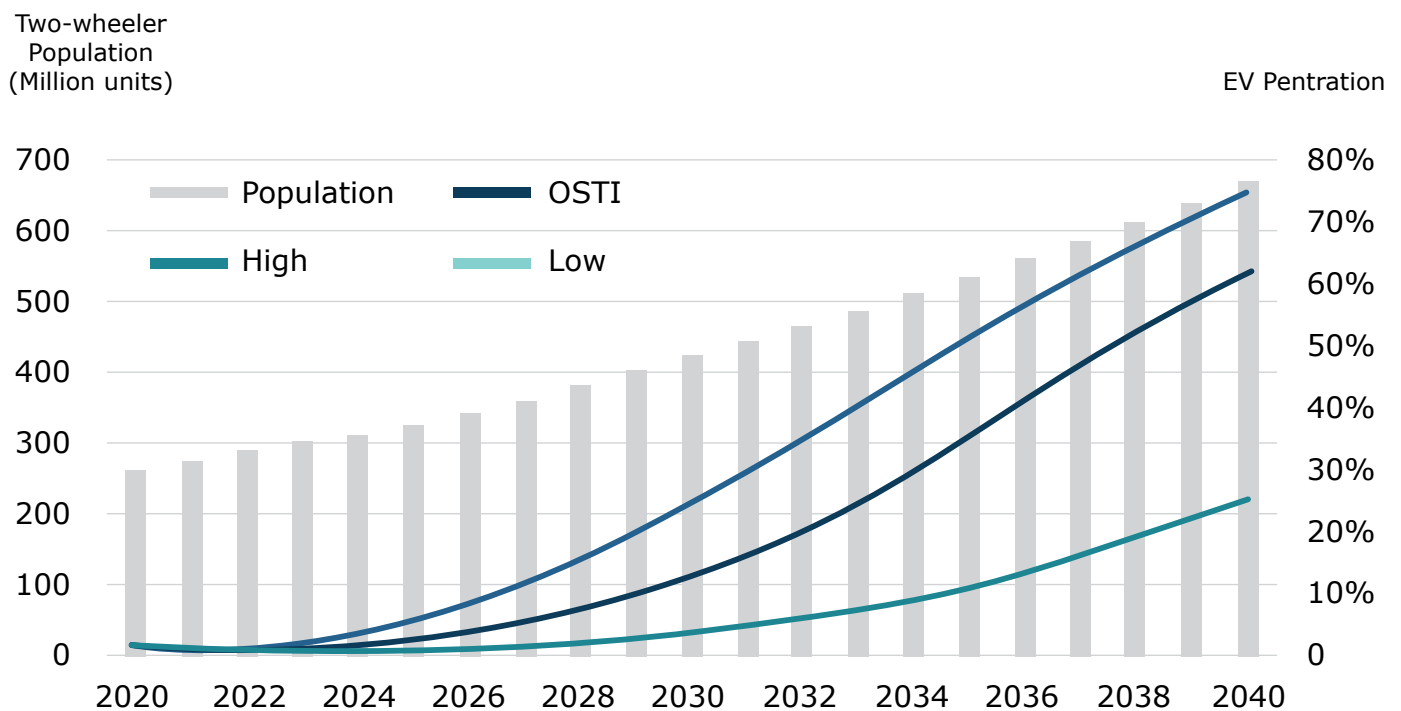
- Press Information Bureau ([pib.gov.in](http://pib.gov.in))
- Honda, KTM, Piaggio and Yamaha to form consortium for swappable batteries ([autocarpro.in](http://autocarpro.in))



# How will the two-wheeler vehicle parc evolve?

The two-wheeler vehicle parc will undergo a sea change due to all the factors described above. Kline anticipates rapid penetration of electric two-wheelers propelled by several stakeholders — government, OEMs, energy companies offering battery-swapping/charging facilities, and end users (for both business and personal use). Under the three scenarios analyzed below, EV penetration could grow to between 25% and just under 75% by 2040. In comparison, the current penetration of EVs is effectively 0%.

## Electric Two-wheeler Capacity And Expansion Plans Of Select OEM's



"Low" EV penetration considers a 60% share of EVs in two-wheeler sales to the personal-mobility and business-use segment by 2040

"High" EV penetration considers a 100% share of EVs in two-wheeler sales to the personal-mobility and business-use segment by 2035.

"OSTI" EV penetration considers a 100% share of EVs in overall two-wheeler sales by 2030. This scenario is based on Indian Government's Office Scientific and Technical information



Does this projection look overly optimistic for EVs? Will the Indian two-wheeler parc undergo such a drastic change in 20 years? Consider the following: Between 2001 and 2021, the two-wheeler parc in India grew at a compound average growth rate (CAGR) of 10%. The forecast projects a lower CAGR of less than 5% for the coming 20 years. In 2021, two-wheeler penetration in India stands at 202 vehicles per 1,000 people. In contrast, Indonesia has a penetration of 420 vehicles per 1,000 people. The projection assumes that India will achieve this penetration by 2040.

Reliance BP Mobility to invest up to ₹3,000 cr in fuel retail business (live-mint.com)

Zypp Electric partners with BigBasket, Grofers & more: Sets up 50 battery swapping stations - The Financial Express..

Will the share of EVs in the total population reach the levels projected in the above chart? More than 150 million EVs will need to be added in the “low” scenario. To achieve this, the manufacturing capacity will have to ramp up significantly over the next few years. If all of the expansion plans noted above materialize, EV manufacturing capacity in India will exceed 12 million units per year by 2022. The expansion plans noted above do not include leading two-wheeler OEMs such as TVS and Bajaj, which also enter this market with dedicated production lines. EV assembly-line capacity may not be a large issue. The bottleneck may lie with having sufficient battery capacity to support battery swapping.

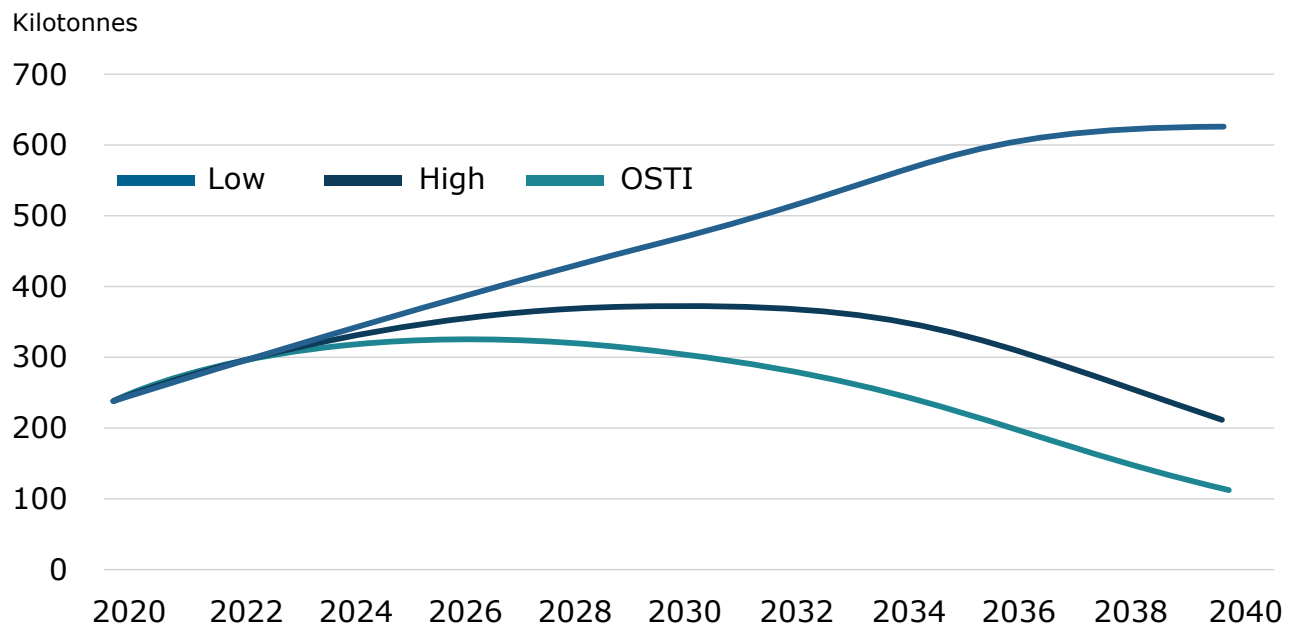
On the demand side, pricing, features, and the green tag can motivate a diverse customer base to use EVs. Most EVs offered are priced in the economy range, with the price point of popular models ranging from INR 40,000 (USD 550) to INR 120,000 (USD 1,650) and with only a few models exceeding this price range. As such, EVs are eminently affordable for much of the population. They are particularly attractive to young consumers, as low-speed EVs do not require registration or a driver’s license. EVs are also very attractive to various e-commerce and food-delivery companies for last-mile delivery. In addition to being economical, they demonstrate a commitment to sustainability, creating a positive image. Battery swapping offers a convenient charging process, which increases the attractiveness of EVs.



# What does this mean for motorcycle oil demand?

The change in the two-wheeler parc composition will be reflected in the changing demand for MCOs. Depending on the scenario, MCO demand is expected to peak between 2030 and 2040. Two-wheeler maintenance is a tremendous industry, involving both organized and unorganized channels. While the sale of spare parts represents an important aftermarket segment, lubricants are equally as important. Lubricants used in two-wheelers include MCO, gear oil, fork oil, rear-suspension oil, grease, and chain oil. Given the size and growth in this market segment, MCOs garner special focus from most lubricants suppliers looking to grow or maintain their market share. Some of the leading suppliers of MCOs to OEMs and aftermarkets in India are BP, NOCs (IOCL, HPCL, BPCL), Savita Oil, and Gulf Oil with their brands Castrol, Servo, HP, MAK, Savsol, and Gulf, respectively.

## Motorcycle Oil Demand In India, 2020-2040



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# Electrification of two-wheelers creates new opportunities and challenges

Industry participants, including OEMs, oil companies, retail, and installer channel partners, are waking up to a change that seems imminent. While the OSTI scenario appears overly optimistic for EVs, it is inevitable that MCO demand will see a peak within the next 10-20 years. That gives industry participants enough time to create a position in the EV market, from maintenance to battery swapping and other services. In the short term, oil companies will need to fight hard to retain MCO market share. OEMs are expanding their offerings of genuine oils in a bid to retain customers and engender loyalty, with an eye toward future vehicle sales. EV maintenance requirements are lower than those of ICE vehicles, but these expenses are not non-existent. Market participants need to focus on these, along with providing charging infrastructure/battery-swapping services to stay relevant.