



# Roundup of Indian sectors

February 2024



Fertilizers ➤

## Overview

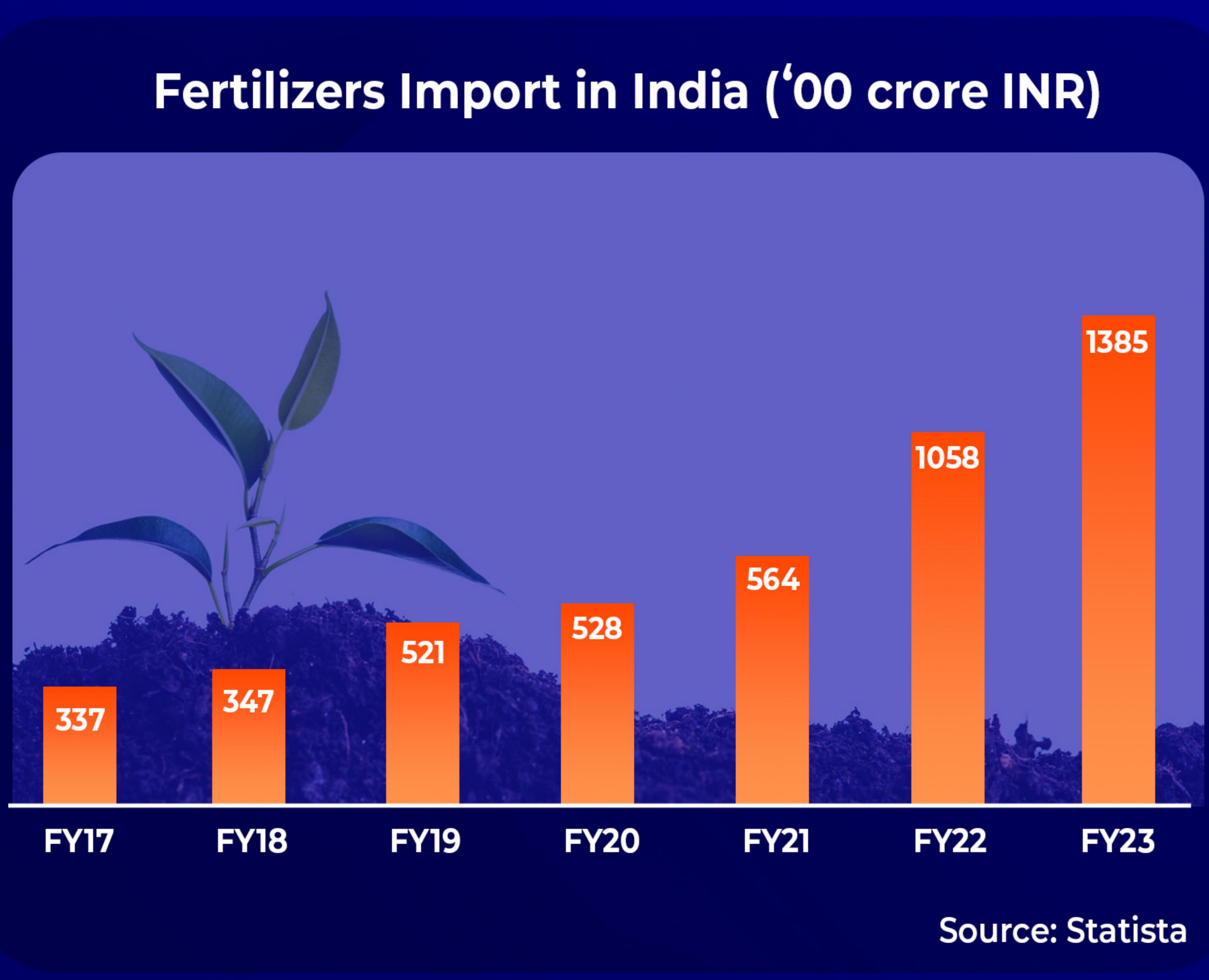
- Fertilizer is a substance used to provide essential nutrients that may be deficient in the soil, such as nitrogen, phosphorus, and potassium, which are essential for plant growth and productivity. It is essential for ensuring food security and driving rural employment.
- India is the second largest consumer of fertilizers around the world followed by China. Urea is the most produced, imported, consumed, and physically regulated fertilizer of all in the country.
- Fertilizer products are divided into two categories – Biofertilizers and Chemical Fertilizers. Biofertilizers are derived from natural sources such as compost, manure, and plant residues and promote soil health and sustainability. Chemical or synthetic fertilizers are manufactured to provide precise nutrient composition and faster results. Fertilizers in the market are available in varied forms like granules, powders, and liquids.

**Top global consumers of fertilizers  
(million metric tons)**



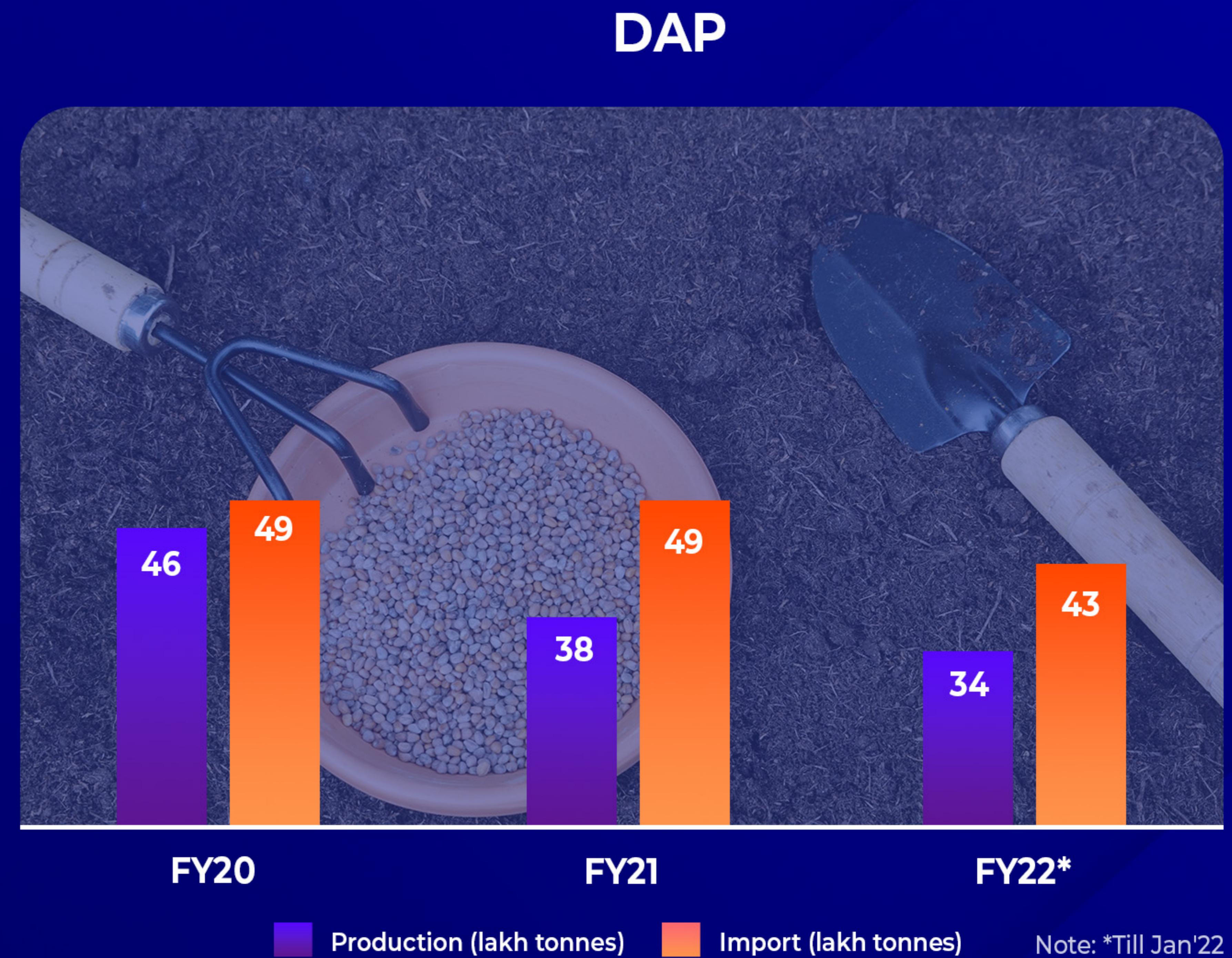
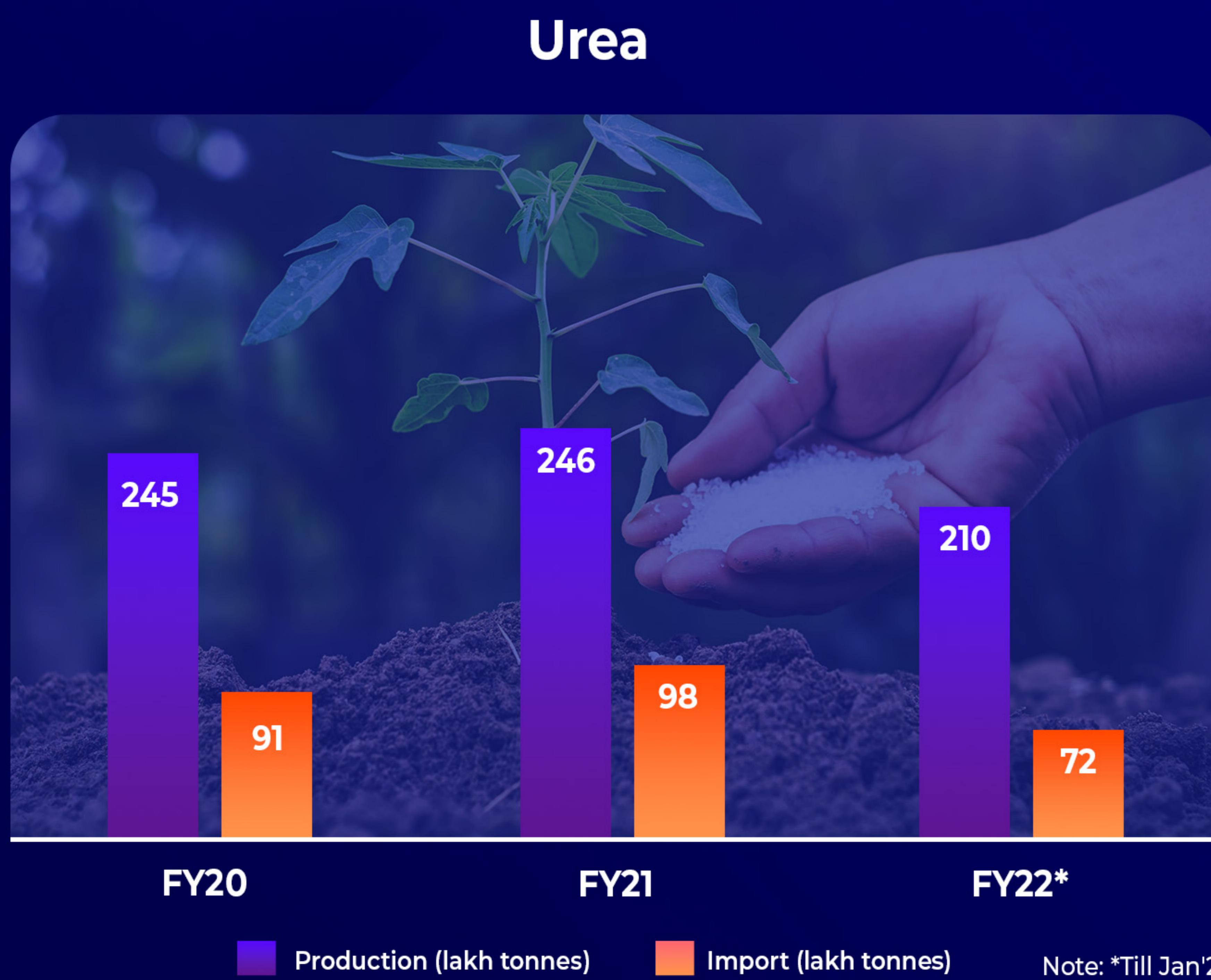
Source: Statista

- ▶ India depends heavily on imports for finished fertilizers. A significant amount of urea consumed in the country is, in fact, imported. Apart from importing finished fertilizers, India also depends on importing crucial raw materials for fertilizer production like rock phosphate, ammonia, and phosphoric acid. In FY2022-23, India imported fertilizers valued at ~INR1.4 lakh crore.



- ▶ Product-wise, fertilizers are classified into Urea, Diammonium Phosphate (DAP), Single Super Phosphate (SSP), Muriate of Potash (MOP) and other Complex fertilizers like Calcium Ammonium Nitrate (CAN) and various grades of NPK Fertilizers (Fertilizers having different grades of Nitrogen (N), Phosphorus (P), and Potassium (K)).

- Urea dominates the total fertilizer production in the country, accounting for ~60% of the output, followed by DAP and MOP. Urea is an inexpensive form of nitrogenous fertilizer and is synthetically produced in large quantities in India. It offers the highest nitrogen at the lowest price in the Indian market due to heavy government subsidies.



- The fertilizer industry in India is highly regulated and monitored by the government of India. It is via subsidies that the government controls prices of urea (for agricultural uses) and non-urea-based fertilizers on nutrients like nitrogen, phosphate, potash, sulphur under the Nutrient-based Subsidy (NBS) regime implemented since 2010. The NBS deals with 22 grades of decontrolled fertilizers namely DAP, MAP, TSP, DAP Lite, MOP, SSP, ammonium sulphate, and 15 grades of

complex fertilizers. Under the NBS scheme, subsidies to farmers based on their fertilizer requirements are directly transferred to their bank accounts.

However, NBS fertilizers, unlike urea whose MRP is fixed by the government, are technically decontrolled. Under NBS, the MRP of fertilizers is set to be market-determined and decided by the companies selling them. The government pays a fixed per-tonne subsidy on each of these fertilizers, linked to their nutrient content or a specific percentage of nitrogen (N), phosphorous (P), potassium (K), and sulphur (S). But, effective from April 1, 2023, the Department of Fertilizers (DoF) implemented guidelines on the “reasonableness” of the MRPs for all non-urea fertilizers covered under NBS. Under the guidelines, DoF has set maximum profit margins for fertilizer companies — 8% for importers, 10% for manufacturers, and 12% for integrated manufacturers (producing finished fertilizers as well as intermediates such as phosphoric acid and ammonia). Any company earning

“unreasonable profit”, which exceeds the stipulated percentages, in a particular fiscal year will have to refund the same to the DoF by October 10 of the following fiscal year.

- ▶ Despite the benefits, fertilizer subsidies in India gave rise to several issues such as
  - Prices of the other decontrolled fertilizers have gone up leading farmers to use more urea and DAP than before.
  - It is causing nutrient imbalance due to the disproportionate use of other expensive fertilizers. The recommended ratio of fertilizer usage is 4:2:1 for nitrogen (N), phosphorus (P), and potassium (K) fertilizers. However, the actual ratio is much higher for N (due to excessive consumption of urea) and lower for P and K which could cause nutrient deficiencies, soil degradation, and lower crop yields.

- It has led to financial stress for the government due to the increasing consumption of fertilizers.

allocated INR1,64,150 crore for the fiscal year, lower than INR1,75,148 crore in the last year's budget.

### Fertilizer Subsidy (INR crore)



Source: Minister of State for Chemicals and Fertilisers, Economic Times

In the 2024 Interim Budget, the Centre has reduced allocation for fertilizer subsidies for FY2024-25 hoping that higher domestic production of essential fertilizers like urea would lower the need for subsidies. It has

### Current Outlook

- The Indian fertilizer market is expected to grow at a 5-year CAGR of 5-7% over 2024-29. The catalysts of growth include a growing population, rapid urbanization, rising consumption of food, emerging technological advancement, and the implementation of favorable government initiatives.
- However, the future growth of the fertilizer industry in India requires sustainable and efficient solutions which include:

**Promoting balanced fertilization:** Farmers need to be encouraged to use a balanced mix of nutrients to optimize productivity.

**Strengthening domestic production:** High reliance on imports should be reduced by enhancing

domestic production capacities to the industry more self-reliant and lower the financial stress due to subsidies.

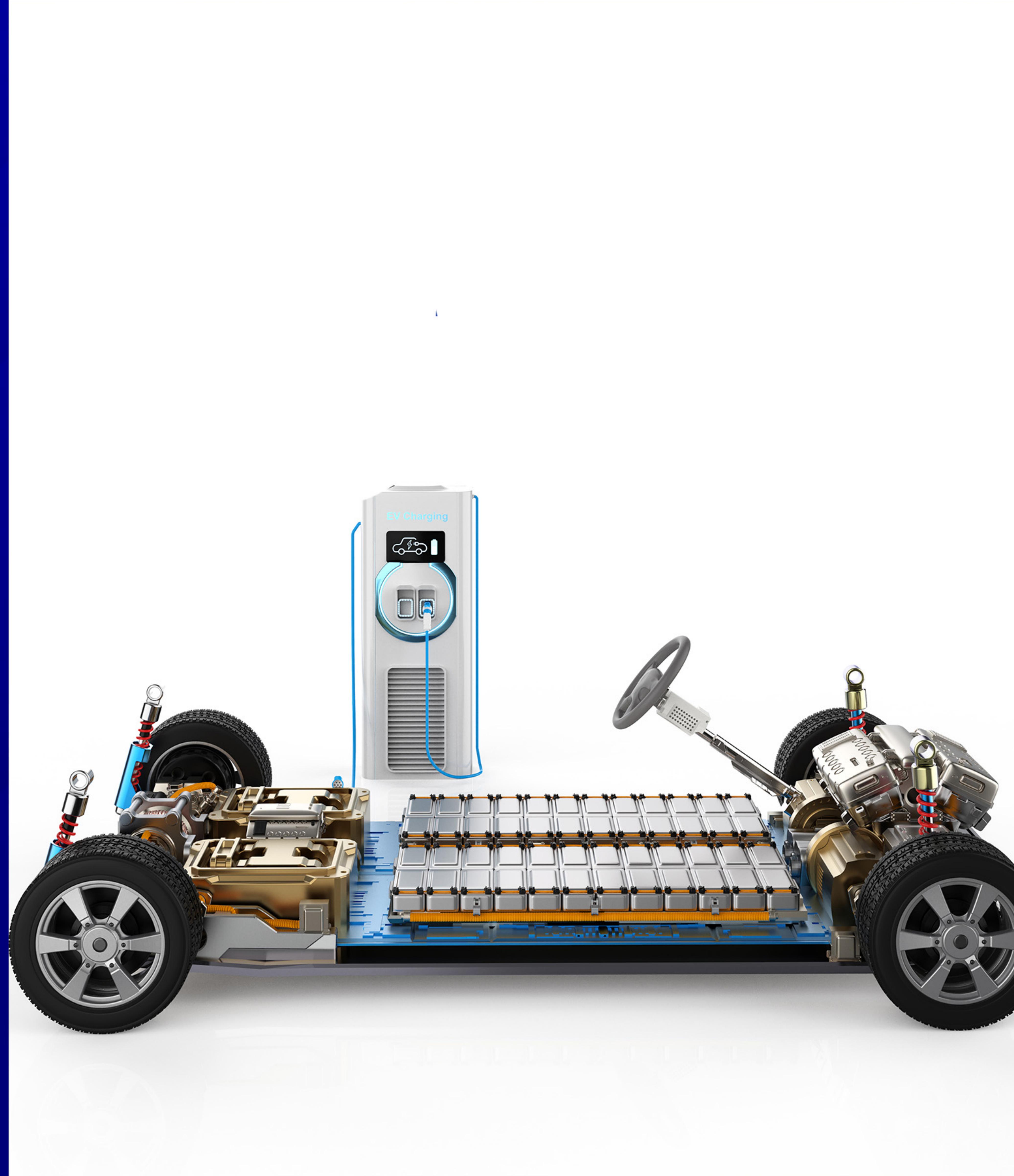
**Push for organic fertilizers:** Organic fertilizers should be promoted as a sustainable alternative to chemical fertilizers mitigating environmental harm.

### Recent News

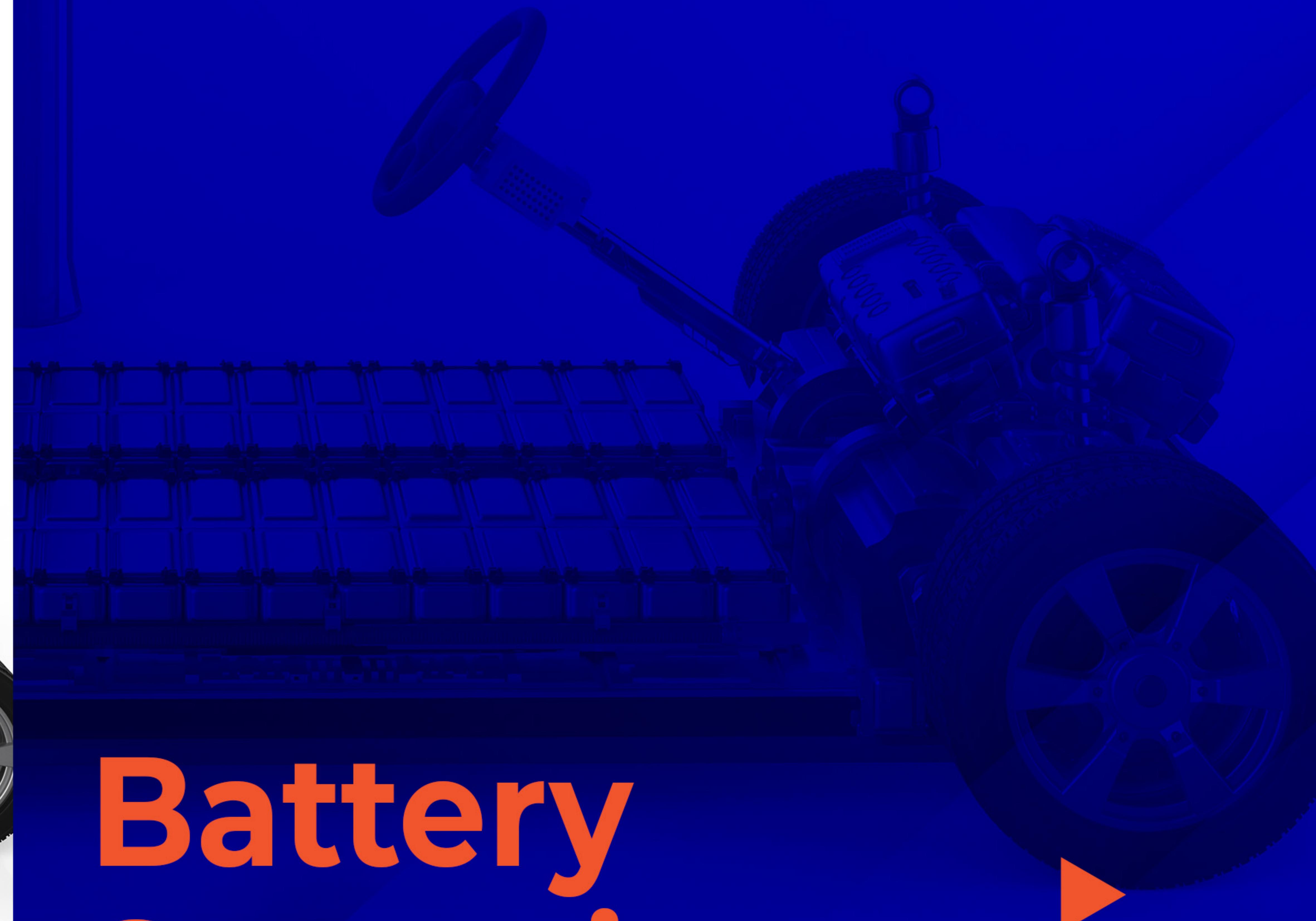
► Pune-based Deepak Fertilisers and Petrochemicals Corporation Limited has entered into a 15-year LNG contract with Equinor, an energy company headquartered in Norway. The agreement aims to provide a reliable and sustainable energy source for Deepak Fertilisers' operations, ensuring long-term stability and efficiency in their manufacturing processes. The company aims to enhance its value chain by securing a favorable long-term LNG contract, thereby fortifying its operations from gas procurement to the production of a range of downstream fertilisers,

industrial chemicals, and mining chemicals.

► Mangalore Chemicals & Fertilisers Ltd and Odisha-based Paradeep Phosphates Ltd have approved a merger scheme, aiming to create one of India's largest integrated private sector fertiliser companies. The combined entity will have a manufacturing capacity of 3.6 million metric tonnes per annum (MMTPA). The merger, subject to regulatory approvals, is expected to optimize operations, expand market reach, and unlock synergies for sustainable growth.



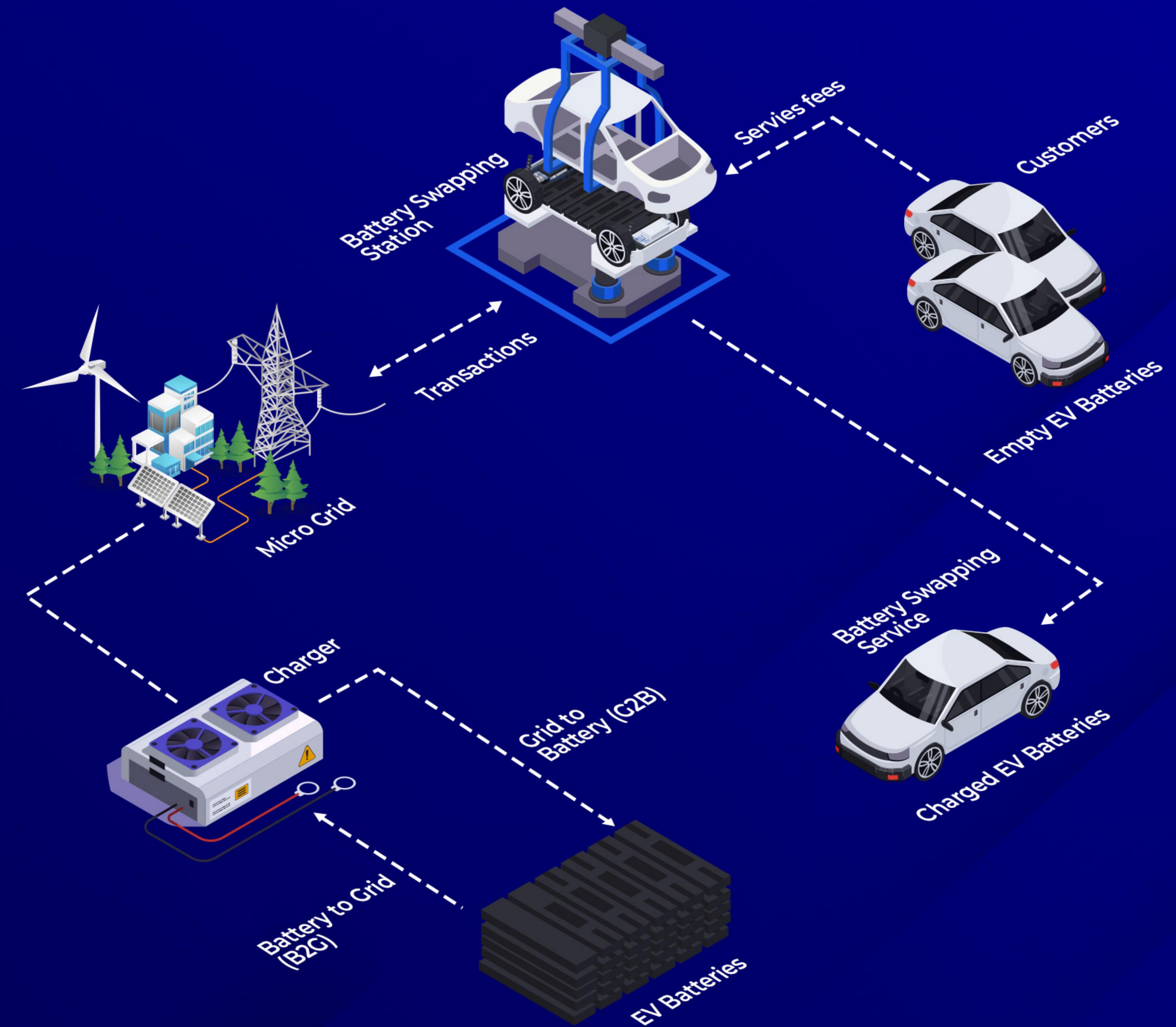
# Battery Swapping



## Overview

- ▶ Battery swapping enables electric vehicle (EV) drivers to exchange depleted batteries for fully charged ones at swap stations, alleviating the need for extensive charging infrastructure and assuaging driver concerns about range anxiety. Additionally, battery leasing offers cost savings for EV owners compared to outright battery purchases. This service offers quicker turnaround times, taking mere minutes as opposed to the hours typically required for traditional charging methods, and demands minimal infrastructure investment.
- ▶ Some of the leading battery swapping solution providers in India are Sun Mobility, Ola Electric, Lithion Power, Voltup, Race Energy, Esmito, Numocity, BatterySmart, ChargeUp, and Okaya Power Group.

### How Battery Swapping System Works



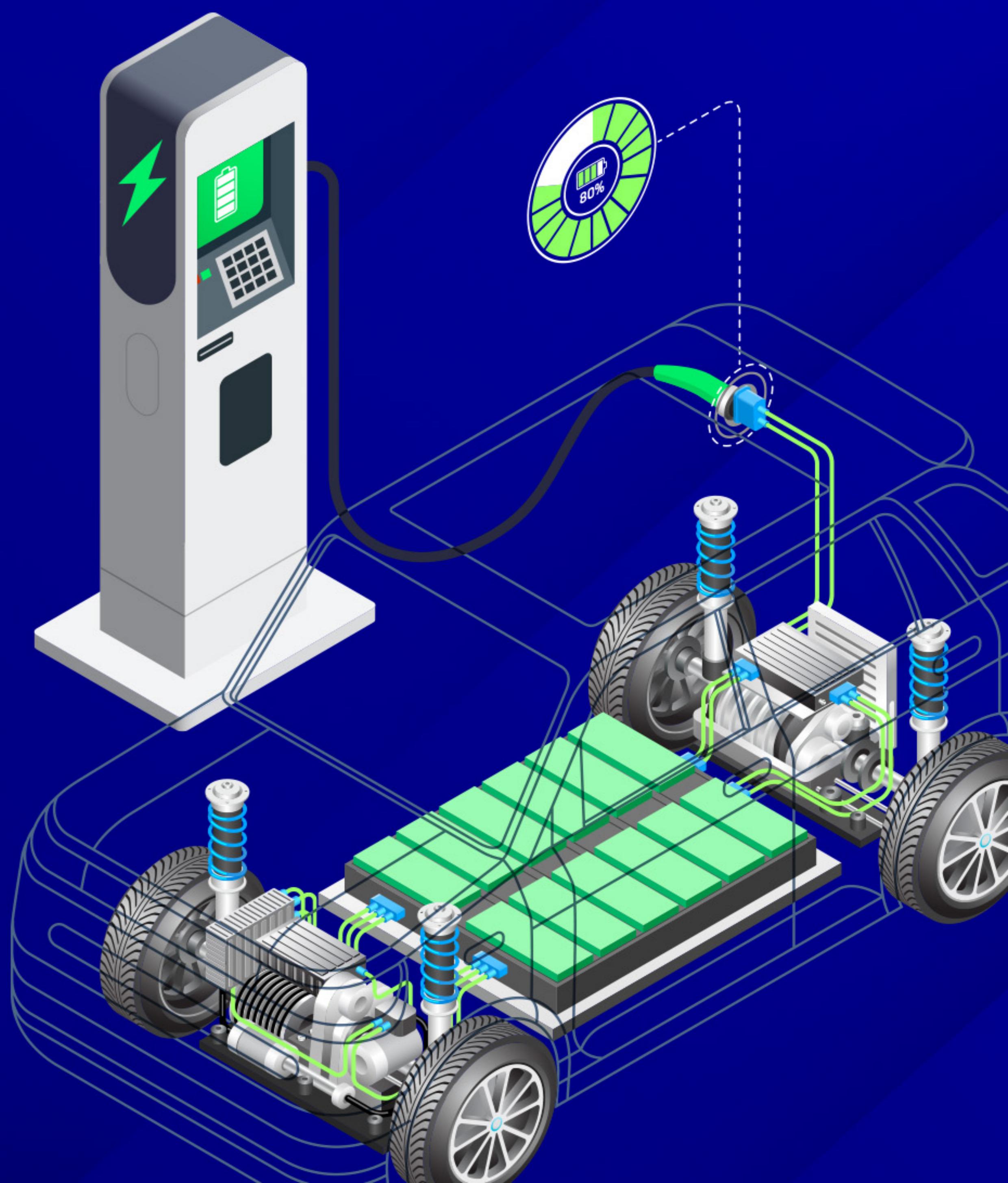
► In February 2022, NITI Aayog convened an inter-ministerial dialogue aimed at crafting a robust and all-encompassing framework for Battery Swapping policy, with the aim of enhancing and optimizing the efficiency of the battery swapping ecosystem, thus fostering the adoption of EVs. By collaborating with various stakeholders, including government agencies, industry players, and research institutions, NITI Aayog seeks to develop a comprehensive framework that ensures interoperability, safety, and sustainability in battery swapping operations.

► Few of the challenges faced in battery swapping include technological compatibility issues among different EV models, standardization of battery modules and connectors, ensuring sufficient infrastructure deployment, addressing concerns regarding battery degradation and maintenance, managing the logistics of battery swapping stations, and addressing regulatory and safety concerns. Additionally, the high initial investment required for

setting up battery swapping infrastructure and the need for widespread consumer acceptance pose significant hurdles to its widespread adoption.

### Current Outlook

► India's battery-swapping industry is experiencing rapid and exponential growth. It was valued at approximately US\$10 million in 2022, and projections indicate that it could rise to around US\$62 million by 2030, at an 8-year CAGR of ~25%.



- The Faster Adoption and Manufacturing of Electric Vehicles (FAME) I and II scheme, the Production Linked Incentive (PLI) scheme, and the Charging Infrastructure for Electric Vehicles Guidelines are all initiatives aimed at promoting the adoption and usage of EVs in India. They contribute to the broader ecosystem of electric mobility, which includes various aspects such as EV manufacturing, charging infrastructure development, and incentives for EV adoption. Battery swapping can benefit from these schemes indirectly as they encourage the growth of the EV market and associated infrastructure, which in turn creates opportunities for innovative solutions like battery swapping to thrive.



- Over the past few years, there has been a surge in investor attention towards the battery swapping sector, marked by a significant influx of capital. According to data by Tracxn, the segment raised around US\$135 million from January 2021 till October 2023.

### Recent News

- Hyderabad based two-wheeler maker Quantum Energy has partnered with New Delhi based battery-swapping network provider for two- and three-wheelers Battery Smart to introduce swappable batteries, aiming to address range anxiety and charging infrastructure limitations in India's electric vehicle market. This collaboration aims to offer a cost-effective and efficient solution for EV owners, enhancing the adoption of electric vehicles across the country. Battery Smart's extensive network spanning over 900 swap stations across more than 5 cities will facilitate battery swapping services for Quantum's electric scooters.

- Indian Oil Corporation (IOC) inaugurated its first EV battery swapping station in Kolkata in December 2023, marking its entry into the rapidly growing EV market. This initiative is part of IOC's broader strategy to expand its presence in the renewable energy sector and promote sustainable mobility solutions. IOC plans to scale up its battery swapping network across various cities in India to support the widespread adoption of electric vehicles and reduce carbon emissions in the transportation sector.
- **SAR Group's Livguard, a battery manufacturer based in Gurgaon, has acquired Emuron Tech, a Delhi NCR-based startup specializing in EV battery swapping technology. With this acquisition, Livguard aims to venture into the EV battery swapping space, capitalizing on Emuron Tech's expertise and technology. The move aligns with Livguard's strategy to diversify its product offerings and tap into the growing market for electric mobility solutions.**
- Lectrix EV, an electric two-wheeler manufacturer based in Gurgaon, has introduced a battery swap network in Delhi, offering a convenient solution for EV owners. Users can access the battery swap services of the company through a mobile app, locating nearby swap stations and scheduling swaps as needed. Customers can access unlimited service with a subscription of INR 2,299 per month. Additionally, these stations are capable of accommodating both smart and non-smart EVs without batteries, providing cost-effective charging solutions on a daily basis.

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