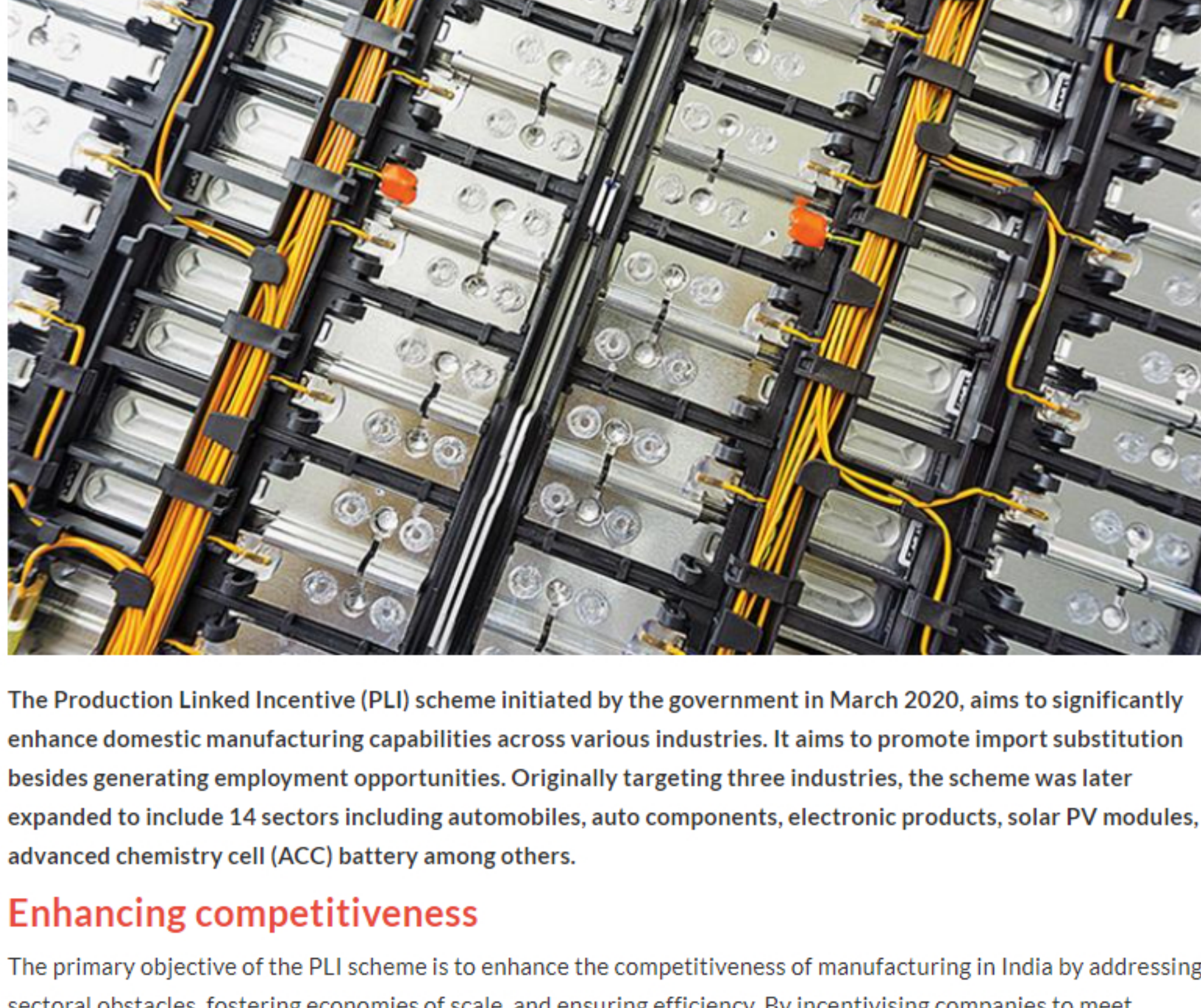


## Strong support for EV ambitions

New policies and initiatives reflect the government's comprehensive approach to driving industrial growth, fostering innovation, promoting sustainable mobility solutions, and strengthening India's position in emerging sectors like electric mobility and advanced manufacturing, reports rating agency CRISIL Market Intelligence & Analytics (MI&A).

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The Production Linked Incentive (PLI) scheme initiated by the government in March 2020, aims to significantly enhance domestic manufacturing capabilities across various industries. It aims to promote import substitution besides generating employment opportunities. Originally targeting three industries, the scheme was later expanded to include 14 sectors including automobiles, auto components, electronic products, solar PV modules, advanced chemistry cell (ACC) battery among others.

### Enhancing competitiveness

The primary objective of the PLI scheme is to enhance the competitiveness of manufacturing in India by addressing sectoral obstacles, fostering economies of scale, and ensuring efficiency. By incentivising companies to meet specific targets for technological production, exports, and capital expenditure, the scheme encourages investments in modernisation for, incremental adoption, and expansion of manufacturing capacities.

### Integration into global supply chains

By creating a comprehensive component ecosystem within India, it will enhance India's attractiveness as a manufacturing destination, leading to increased investments from both domestic and international players seeking to leverage India's competitive advantages and market potential.

### Reduction of dependence on imports

One of the key objectives of the PLI scheme is to reduce India's dependence on raw material imports, and create a sustainable local value chain domestically. By incentivising domestic manufacturing across various sectors, the scheme promotes self-reliance and strengthens India's economic resilience by mitigating risks associated with supply chain disruptions and external dependencies.

### Economic growth and employment generation

The implementation of the PLI scheme is expected to stimulate economic growth over the medium term by fostering investment, innovation, and productivity improvements across sectors. Additionally, since many of the sectors covered under the scheme are labour-intensive, increased investments are likely to generate employment opportunities, thereby contributing to inclusive growth and socio-economic development.

### Sectoral expansion

The PLI scheme is anticipated to drive growth in key industrial sectors such as construction, oil and gas, metals, electronics, pharmaceuticals, textiles, and energy. Analysis by CRISIL MI&A suggests a significant rise in construction investments in the industrial segment between fiscal years 2023 and 2027, primarily attributed to the inclusion of the PLI scheme in capital expenditure plans. This sectoral expansion is expected to further stimulate economic activity and drive industrial development.

Overall, the PLI scheme is poised to play a crucial role in catalysing industrial investments, fostering competitiveness, promoting domestic manufacturing, and accelerating India's economic growth trajectory in the short-to-medium term.

### Boon for automotive industry

The PLI scheme for the automotive industry in India is designed to drive high-tech green manufacturing, specifically targeting Advanced Technology Vehicles (ATVs) such as electric and hydrogen fuel cell vehicles. This scheme aims to foster innovation and investment in cutting-edge automotive technologies while promoting environmental sustainability.

### Exclusion of conventional segments

The PLI scheme excludes conventional petrol, diesel, and CNG segments (internal combustion engines) from its scope, as these segments are deemed to have sufficient manufacturing capacities in India. Instead, the focus is on incentivising the production of ATVs to align with global trends towards cleaner and greener mobility solutions.

### Eligibility for participation

The scheme covers over 100 Advanced Technology Vehicle (ATV) components, including crucial elements such as hydrogen fuel cells, hydrogen injection systems, electric vehicle (EV) motors, and lightweight cryogenic cylinders. By incentivising the production of these components, the scheme aims to support the development and adoption of advanced automotive technologies in the Indian market.

The PLI scheme for auto parts comprises two main component schemes:

- **Champion Original Equipment Manufacturers (OEM) Scheme:** This scheme is linked to the sales value of battery electric and hydrogen fuel cell vehicles across all vehicle segments. It incentivises OEMs to ramp up production and adoption of these environmentally friendly vehicles.
- **Component Champion Incentive Scheme:** This scheme is also linked to the sales value and encompasses a broader range of components, complete- and semi-knocked down (CKD/SKD) kits, and vehicle aggregates across various vehicle categories, including two-wheelers, three-wheelers, passenger vehicles, commercial vehicles, and tractors. It encourages the manufacturing of advanced technology components prescribed by the Ministry of Heavy Industries.

Automotive and Advanced Chemistry Cells (ACC) In addition to the automotive sector, the PLI scheme extends to Advanced Chemistry Cells (ACC) Battery storage. The policy for ACC Battery storage aims to boost India's manufacturing capabilities in battery technology, particularly for electric vehicles and energy storage applications. With a significant budgetary outlay, the policy seeks to establish Giga-scale ACC battery manufacturing facilities in India with a focus on maximising domestic value addition. This initiative aligns with the broader goals of promoting electric mobility and reducing dependence on imported battery technology.

### Way forward

Overall, the PLI scheme for the automotive industry, coupled with incentives for ACC battery storage, underscores the Indian government's commitment to fostering innovation, promoting sustainable mobility solutions, and strengthening the country's position in the global automotive and renewable energy sectors.

### New energy vehicles

The Government of India has implemented several policies and initiatives to support the adoption of electric vehicles (EVs) and develop a robust EV ecosystem. Key policies and their objectives include the National Electric Mobility Mission 2020 (NEMMP 2020) that was launched in 2012.

NEMMP 2020 was designed to have 6-7 million electric vehicles on the road by 2020. It provided a comprehensive framework for promoting electric mobility through various measures, including incentives for EV adoption, technology development, pilot projects, and charging infrastructure deployment.

### Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles Scheme

FAME I: Introduced in 2015 with a budget outlay of Rs 895 crore, FAME I focused on technology development, demand creation, pilot projects, and charging infrastructure development. It provided subsidies for the purchase of electric vehicles and supported the deployment of electric buses and charging stations.

FAME II: The scheme which rolled out in 2019 with an outlay of Rs 10,000 crore for 5 years, aimed to accelerate the adoption of EVs by providing incentives for electric buses, three-wheelers, four-wheelers (for commercial purposes), and two-wheelers. It also supported the development of charging infrastructure across various cities, states, expressways, and highways.

The PLI scheme, along with the Phased Manufacturing Program (PMP), was introduced to support the EV supply ecosystem. It provides incentives to OEMs, battery manufacturers, and tier suppliers to promote domestic manufacturing of electric vehicles and components.

The PLI scheme for Advanced Chemistry Cell (ACC) Battery Manufacturing came with a budgetary outlay of Rs 18,100 crore. Its purpose was to enhance India's manufacturing capabilities in ACC batteries. This initiative is crucial for promoting the adoption of electric vehicles by ensuring a reliable and cost-effective supply of batteries. In June 2021, the demand incentive for two-wheelers (2ws) under the FAME II scheme was revised to provide a subsidy of Rs 15,000 per kilowatt-hour (kWh) of battery capacity, capped at 40% of the vehicle cost. This incentive aimed to encourage the adoption of electric two-wheelers by reducing the upfront cost for consumers, thereby making them more affordable and attractive compared to traditional internal combustion powered engine vehicles.

However, in June 2023, there was a revision in the demand incentive for 2ws. The subsidy amount was reduced to Rs 10,000 per kWh of battery capacity from the previous Rs 15,000 per kWh. Additionally, the maximum subsidy cap was lowered from 40% to 15% of the vehicle cost. This reduction in incentives suggests a shift in government policy, possibly due to budget constraints, recalibration of subsidy structures, or changes in market dynamics.

Despite the reduction in incentives, the government continued its support for electric mobility through schemes like FAME II as its commitment to promoting sustainable transportation and reducing vehicular emissions. Therefore, EVs remain a key focus area for India's efforts to combat air pollution, reduce dependence on fossil fuels, and achieve its climate change goals.

The PLI schemes for the automobile and auto component industry extends to Advanced Chemistry Cells (ACC) battery storage with the objective to boost domestic manufacturing, promote localisation, and strengthen the ecosystem for electric vehicles (EVs) and battery storage.

After the official sunset of the FAME II scheme in March 2024, the MHI has come up with the Electric Mobility Promotion Scheme (EMPS) 2024 with an outlay of Rs 500 crore which will continue till July 31, 2024, and has capped the incentive of e2w at Rs 10,000 and e3w at Rs 50,000. Both categories will receive incentives of Rs 5,000 per KWH.

### Automobile and Auto Components

The PLI scheme for Automobile and Auto Components came with a budget outlay of Rs 25,938 crore over five years. In order to incentivise the manufacturing of Advanced Automotive Technology (AAT) products, it seeks to promote localisation of AAT products and create an indigenous value chain.

Champion OEM Incentive Scheme: This scheme offers incentives linked to sales value for Battery Electric Vehicles (BEV) and Hydrogen Fuel Cell Vehicles (FCEV) across various vehicle segments, addressing cost disabilities faced by OEMs related to making AAT vehicles.

Component Champion Incentive Scheme: This scheme incentivises pre-approved AAT components, CKD/SKD kits, and vehicle aggregates across vehicle categories. It encourages the manufacturing of advanced technology components prescribed by the Ministry of Heavy Industries.

### Implementation

As of September 2023, 18 companies have been approved under the Champion OEM Incentive Scheme, while 67 companies have secured approval under the Component Champion Incentive Scheme. The scheme attracted proposed investments of Rs 74,850 crore against a target estimate of Rs 42,500 crore over five years.

The PLI policy for ACC battery storage came with a budget outlay of Rs 18,100 crore and it specifically aims to enhance India's manufacturing capabilities in ACC by setting up Giga-scale ACC battery manufacturing facilities with maximum domestic value addition.

### Eligibility

Beneficiary OEMs must achieve a domestic value addition of at least 25% and raise it to 60% within five years. They are also required to make a mandatory investment of Rs 225 crore per GWh for committed capacity within two years.

In the first round of PLI awards (March 2022), three companies secured incentives for lithium-ion cell manufacturing and sodium-ion cell manufacturing, committing a combined investment of Rs 27,000 crores. The incentives will be disbursed over a fixed period of five years from the time of commissioning the manufacturing facility.

### Phased Manufacturing Program (PMP)

Under the FAME II policy, the PMP aims to boost domestic manufacturing of EVs, assemblies/sub-assemblies, and parts/sub-parts, thereby increasing domestic value addition.

The PMP offers a scaled duty structure for imported EV parts, promoting local manufacturing. Additionally, the government has reduced and rationalised basic custom duty on electric vehicles to further support indigenous development.

### Charging infrastructure

The government has initiated several measures to promote the development of charging infrastructure and battery swapping facilities to support the adoption of electric vehicles (EVs) in the country.

### Establishment of Public Charging Stations

The government aims to establish five lakh public charging stations (PCS) by 2025 to address the lack of charging infrastructure, which is a significant barrier to EV adoption. Financial assistance is offered to states and private companies to facilitate the deployment of PCS across the country.

The Ministry of Power has issued revised guidelines and standards for charging infrastructure to enhance the station density and distance between charging stations.

The new standards mandate at least one charging station within a grid of three-by-three kilometres and one charging station every 25 kilometres on both sides of highways/roads.

For long-range and heavy-duty EVs, one fast charging station is required for every 100 kilometres, on each side of the road/highway.

### Tariff Regulation for EV Charging

The policy has been amended to cap the maximum tariff applicable to EV public charging, ensuring affordability and accessibility of charging services for EV owners.

In addition to Battery Charging Stations (BCS), the government is promoting battery swapping as an alternative solution for EV charging.

A draft Battery Swapping Policy was released in 2022, aiming to standardise battery specifications and create a battery swapping network through the rollout of Battery Swapping Stations (BSS) in a phased manner.

The policy primarily targets light electric powertrain vehicles (LEV) of category L, E-Rickshaw, and E-Cart.

It emphasises the importance of reusing end-of-first-life swappable batteries and recycling end-of-life batteries, promoting sustainability and environmental responsibility.

Overall, these policies and initiatives are crucial for building the necessary infrastructure to support the widespread adoption of electric vehicles in India. By facilitating access to charging facilities and promoting innovative solutions like battery swapping, the government aims to accelerate the transition towards clean and sustainable transportation.

### Manufacturing of Electric Passenger Cars

Introduced by the Ministry of Heavy Industries (MHI) in March 2024, this scheme aims to position India as a manufacturing hub for electric vehicles (EVs) and attract investments from global EV manufacturers.

Under the scheme, automakers are allowed to import 8,000 EVs per year for a period of five years, with a provision to import a maximum of 40,000 EVs during the same period, provided the company commits to investing in local manufacturing in India.

EVs with a minimum Cost, Insurance and Freight (CIF) value of USD 35,000 or above are eligible for reduced customs duty of 15% for the same period.

The scheme mandates a minimum investment of Rs 4,150 crore (USD 500 million) in India within three years for setting up EV manufacturing facilities and commencing production.

Automakers are also required to achieve a certain level of domestic value addition (DVA) over the next five years.

Eligibility conditions include minimum global turnover and global investment requirements for automotive manufacturing companies.

We have seen investments from the likes of VinFast and Tesla also making its intent to enter the Indian market more clear.

### Battery Recycling

Battery Waste Management Rules 2022 aim to promote the reuse and recycling of Advanced Chemistry Cell (ACC) batteries, setting out the government's vision for battery recycling in India. The policy includes financial incentives, development of standards, and raising awareness about battery recycling. It introduces the concept of Extended Producer Responsibility (EPR), where producers are responsible for collection, recycling, and refurbishment of end-of-life batteries. Targets are set for recovery of battery materials, with mandates for including recycled material in cell production over time.

The battery swapping policy also emphasises the reuse and recycling of swappable batteries, encouraging their use in power banks for energy storage applications after their end-of-life in automotive use.