



**ANANTHA LAKSHMI
PALADUGULA**

RESEARCH SCIENTIST, CENTER FOR
STUDY OF SCIENCE, TECHNOLOGY
AND POLICY (CSSTEP)

In India, the electrification of the transportation sector is considered a vital strategy to reduce greenhouse gas (GHG) emissions and air pollution. Therefore, the central and state governments have introduced policies, financial schemes, guidelines, and standards to accelerate the uptake of electric vehicles (EV). In addition to its favourable impact on the environment, transition to electric mobility can also expedite India's nationally determined contribution (NDC) goals to reduce GHG emission intensity of its gross domestic product (GDP) by 33-35% by 2030, from 2005 level. Though EVs have been around for a long time in India, recent developments in the policy ecosystem have been catalytic in the electrification of the transportation sector in the last decade.

Central Policies

In 2010, the Ministry of New and Renewable Energy (MNRE) under the Alternate Fuels for Surface Transportation Program (AFSTP) incentivised EV purchase. While this program is a short-term plan with fewer incentives, a long-term plan called National Electric Mobility Mission Plan 2020 (NEMMP) was launched in 2013. The aim was to promote the uptake of electric and hybrid vehicles mainly to reduce carbon dioxide (CO₂) emissions and oil dependency and focus on fast-tracking the EV manufacturing sector. The plan proposed 6-7 million sales of electric and hybrid vehicles in India by 2020. However, the uptake has been slow with only about 5.7 lakh EVs being registered since 2012.

In 2015, as part of the NEMMP, 2020, the Department of Heavy Industry (DHI) implemented the Faster Adoption and Manufacturing of Electric Vehicles in India (FAME) India Scheme. Under phase I of the scheme, about 2.78 lakh electric and hybrid vehicles were supported and 465 buses sanctioned. Phase II of this scheme, started in 2019 for a period of three years, will cover 7000 e-buses, 5 lakh e-3 wheelers, 55,000 e-4 wheeler passenger cars and 10 lakh e-2 wheelers.

Other EV-friendly measures include the sale of electric vehicles without batteries, and reducing the upfront cost of EVs by 30-40%. Additionally, the vehicle scrappage policy announced recently in the Budget will come into effect from 1st April 2022. The policy is expected to remove old vehicles, while promoting the adoption of green fuel and a shift to EVs.

State Policies

States have a significant role in the successful implementation of policies formulated by the Centre. In 2019, the Government of India requested states to incentivise EVs and introduce them in shared mobility and public transport operations. Other important measures suggested by the Centre include green registration plates for zero-emission vehicles, exemption of EVs from permit for plying as transport vehicles, and license to those in the age group of 16-18 years to drive E-scooters. State governments are also formulating policies focussing primarily on adoption EVs in the two and three-wheeler segments and public transport. States are also considering pairing renewable energy with EVs, and encouraging investments in the EV manufacturing ecosystem and public charging infrastructure.

Creating an Enabling Ecosystem

As a result of various policy measures, EV sales in the country grew by 20% in 2019-20; sales for the year 2020-2021 were disrupted due to the pandemic. However, for a smooth and widespread transition to electric mobility nationwide, both central and state EV-specific policies, schemes, guidelines, and standards need to be aligned. As urban transport is a major source of GHG emissions and air pollution in cities, policy measures such as regulation of conventional vehicle registration, taxing entry in congested zones, and supporting cleaner fuel and green mobility options such as EV, should be encouraged.

With the current rise in fuel prices and increased demand for personal vehicles, EV uptake can be pushed as an integrated policy/measure by the central and state governments. Reducing range anxiety, and providing access to safe, affordable, reliable charging infrastructure and customer acceptance will be critical components for EV policies. That said, to drive the clean mobility transition in India, an enabling EV policy ecosystem is vital.

“ The aim was to promote the uptake of electric and hybrid vehicles mainly to reduce carbon dioxide (CO₂) emissions and oil dependency and focus on fast-tracking the EV manufacturing sector.

