EXECUTIVE SUMMARY

Between 2017 and 2020, 15 Indian states have either notified or drafted state Electric Vehicle (EV) policies. The vision of state EV policies may be broadly translated into two objectives. The first objective aims to make states preferred destinations for EV and component manufacturing, while the second is to increase EV adoption within states. To attain these objectives, state EV policies have defined a range of supporting incentives which can be divided into three categories -

1. CONSUMER DEMAND INCENTIVES

Given the nascent status of the EV market in the country, demand incentives support the early market development of electric vehicles. They may be purchase or operational incentives, with the former defraying the higher upfront costs of EVs and the latter encouraging on-road EV usage. Demand incentives primarily fall within the mandate of transport authorities and urban development authorities for execution and enforcement at the city and state levels.

State EV policies have outlined a good mix of demand incentives for promoting EV adoption in their regions. The road tax exemptions are a robust complement to the FAME-II purchase subsidies and should be implemented at the earliest by state transport departments. Fiscal allocations for road tax exemptions in state budgets can help in faster deployment of this incentive.

Among non-financial incentives, permit waivers for EVs and a complementary ban on permit renewals for polluting vehicles are expected to be highly impactful in promoting the steady conversion of Internal Combustion Engine (ICE) commercial vehicles to electric. This is significant, as light commercial vehicles are primed for electrification due to favorable economic viability of EVs in these segments. States will need to capitalize on the readiness of this segment, by providing specific incentives for commercial fleets.

Few state policies mention information and educational programs for EVs. This must be remedied at the earliest to increase consumer awareness about EV technologies and available EV incentives. Furthermore, higher-emission vehicles need to be disincentivized through appropriate measures such as fuel cess, carbon tax, higher road taxes etc. And finally, governments should link their EV adoption targets to their environmental sustainability goals, to improve budget allocation and inter-departmental coordination for EV action.

2. CHARGING INFRASTRUCTURE INCENTIVES

A robust network of EV charging infrastructure reassures consumers of charging availability thus reducing range anxiety associated with electric vehicles. State incentives for EV charging include a mix of financial incentives, and planning and regulatory frameworks, that support the deployment and integration of EV charging. At the state level, charging infrastructure mandates come under the purview of energy department agencies, including electricity regulatory commissions, electricity transmission and distribution companies, and renewable energy development corporations. Urban development authorities are responsible for planning regulations that govern the location and setting up of charging stations.
Currently, state capital subsidies and land allocation concessions are geared towards heavy, capital-intensive public charging stations with multiple EV points and high-powered DC chargers. Considering that the first wave of electrification will be led by light vehicles such as 2Ws, 3Ws and small cars, states need to right-size their approach to charging infrastructure, by providing incentives for lighter EV charge points, and by promoting private sector participation through mechanisms such as EV tariffs for commercial charging and by providing electricity connections to charging operators.

State urban development departments need to prioritize amendments to urban development regulations and building byelaws. This will ensure that new buildings are equipped with the necessary electrical infrastructure to support EV charging. At the same time, states can consider innovative financing mechanisms to support community charging banks in existing multi-unit residences and office areas. Additionally, states need to support location planning for public charging infrastructure such that it optimizes accessibility and utilization.
Finally, only a few states have specified the need for integrated consumer interfaces through data-sharing and ease of payment. However, none of the state policies reflect on the need for optimizing grid utilization through managed charging, and planning for electricity grid upgrades, in line with growing charging loads.

3. INDUSTRY INCENTIVES

Industry incentives are aimed at vehicle manufacturers, battery producers and ancillary companies, to encourage the production of electric vehicles and component parts of the EV value chain. Incentives are provided as capital and infrastructure subsidies, as well as human resource and research development.
The investment promotion subsidies and land and infrastructure incentives allow states to create attractive incentive packages for manufacturers. However, monetary incentives are expensive and can only do so much to catalyze the ecosystem. Non-monetary incentives such as EV manufacturing targets, set in conjunction with the industry, may be other effective measures that states can consider for spurring production. At the same time, an attractive business environment requires clear and efficient processes to ensure that companies can set up industries without too many hassles. This requires a planned approach to industrial clusters that consider the social and environmental concerns of local populations.
The other set of incentives that states have deployed relate to skill development, employment generation and research and development. These will be crucial in developing the necessary human resources and effect the shift to higher-value manufacturing. Rather than competing amongst themselves, states may choose to specialize in certain segments of the EV value chain for greater growth.

States, with existing EV policies, are now beginning the process of revising and implementing these policies. At the same time, more states aim to draft and notify their own EV policies. This policy review seeks to provide an overview of state incentives, to facilitate peer-to-peer learning, and to recommend state actions for effective implementation. However, states also need to progress from policy making towards implementation, by putting in place appropriate governance structures, execution roadmaps and budget plans that support necessary state action for the transition to electric mobility.

INTRODUCTION

With ten years remaining to achieve India's ambitious goal of reaching 30% electric vehicle penetration by 2030, radical and coordinated action is needed between all stakeholders to create the necessary momentum. The uptake of electric vehicles, or EVs, is still in its infancy in India, accounting for 0.9% of two-wheeler sales and 0.1% of car sales in 2019 across the country. Compare this to the global market share for electric cars, which was 2.6% in 2019 and is estimated to surpass 3% in 2020.

Governments play an essential role in supporting the mainstreaming of EV technology in the motor vehicle sector. The competitiveness of newer technologies in comparison to incumbent ones grows over time due to established supply chains, scale economies of production, consumer preference, and improved performance and maturity. However, relying only on market forces to achieve the transition to EVs from an entrenched internal combustion engine (ICE) vehicle market is unrealistic. The EV ecosystem will require additional support in its nascency, and the government has a significant role to play.

The case for accelerating EV adoption is strong – transport emissions in Indian cities are growing rapidly, with road transport contributing about 87% of the total . In combination with the aggressive movement towards renewable power generation, EVs can significantly cut down the share of transport and pollution emissions at the local and national levels. Further, transportation is the third-largest energy consumer and the largest consumer of oil fuels, responsible for 70% of diesel and 99.6% of petrol consumption. With India importing about 80% of its oil demand, and the price of crude oil being highly vulnerable due to global geopolitics, transport decarbonization reduces the risk to the country's energy security.

[1] Deccan Herald. April 2020. Electric vehicle sales in India up 20% in 2019-20: SMEV. Available at: https://www.deccanherald.com/

[2] International Energy Agency. June 2020. Global EV Outlook 2020. Available at: https://www.iea.org/reports/global-ev-outlook-2020

[3] Sharma, S., et al. "India-California Air Pollution Mitigation Program (ICAMP)." (2013).

[4] India 2020 – Energy Policy Review, IEA

Simultaneously, electrification presents India an opportunity to strengthen its role and move upstream in the global automotive value chain. Through a two-pronged strategy of localizing production for domestic EV consumption and developing low-cost solutions in niche areas for outsourcing, the country can capitalize on this once-in-a-lifetime opportunity through strategic industrial development of the EV sector.

The government of India has backed an extensive program for transport electrification through the implementation of the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) schemes (I and II), the reduction of the Goods and Services Tax (GST) on EVs to 5%, and an income tax exemption of up to INR 150,000 on interest payments for EV loans. A range of other guidelines and notifications on EV charging standards, delicensing of EV charging services, capping of EV tariff for charging infrastructure, model Development Control Regulations (DCR) and building codes for EV charging, and green license plates for EVs further support the ecosystem.

With transportation being a concurrent subject, states hold many of the policy and implementation levers needed to catalyze the transition to electric mobility.

Therefore, electric mobility requires a coherent strategy developed in close coordination between national and state governments, setting achievable but ambitious targets backed by policy reforms and an implementation roadmap. In this context, it is heartening to see states recognizing the opportunities presented by EVs and working towards realizing the potential gains from the sector. In this report, we explore state actions to support India's electric mobility agenda through the powerful instrument of state EV policies.

STATE-LEVEL INCENTIVES FOR SUPPORTING THE EV ECOSYSTEM

1.

The Government of India (GoI) has ambitious targets for electric mobility in the country. However, it is state governments and local authorities that are tasked with the actual implementation of policies and programs to enable the transition to EVs. States, too, see opportunities in the nascent e-mobility sector for economic growth and industrial development. Thus, in addition to supporting the on-ground implementation of central government orders and schemes, some state governments have gone a step further to adopt and implement stand-alone state policies to promote electric mobility.

While an EV policy is not essential for state action, the presence of such a policy signals a state government's commitment to promoting e-mobility. Further, an EV policy provides a vision and objectives to be achieved, and takes an ecosystem approach to incentivize or support various aspects of the EV value chain at the state level. And finally, an EV policy helps define and coordinate action between the responsible government departments and agencies to leverage synergies and partnerships in building the EV ecosystem.