

Operational incentives

While purchase incentives are offered at the time of buying an electric vehicle, governments can also incentivize EV usage through recurring operational incentives. These may include perks such as zero-emission zones or open permit systems for EVs, or they may include usage benefits, such as parking incentives and usage fee waivers.

Non-financial, operational incentives effectively promote EV adoption, but must be designed keeping in mind differences in traffic conditions, travel patterns, consumer preferences, and other local variations⁹. Especially in congested metropolitan areas, operational incentives can prioritize road use for EVs and boost their usage. However, effective deployment of operational incentives, including reserved parking spaces and low-emission zones, requires appropriate regulatory frameworks and enforcement capacity, which is often missing in Indian cities. Developing and implementing the necessary policies and regulations will be an essential first step to incentivize EVs in this regard.

Priority or free permits

State transport authorities issue operating permits to transport vehicles such as autorickshaws, trucks, taxis, and buses, according to the state's motor vehicle rules. Often, permit frameworks tend to be highly regulated, as in the case of a fixed number of permits for autorickshaws within cities or the monopolies on city bus operation permits by state-owned operators. By providing priority permits or periodically removing restrictions on the number of permits for electric vehicles, EV penetration among commercial vehicles can be significantly incentivized.

Which states are using it?

- Andhra Pradesh will offer permit priority for e-autos.
- In Delhi and Tamil Nadu, an open permit system will be applicable for e-autos, wherein permits will be given on a first-come-first-served basis.
- Tamil Nadu also offers permit waivers for light freight EV-3W goods vehicles, e-carriers, and electric light goods carriers.
- Punjab offers a 100% permit fee exemption for all commercial EVs, from e-2Ws to e-buses. For hybrid 4Ws, a 50% permit fee exemption is available.
- Punjab and Kerala will grant new permits only to e-autos in specified cities.

While the GoI has exempted EVs from permit requirements, states are yet to implement the measure in their regions¹⁰. As an alternative, states can consider removing permit caps for EVs, or renewing permits only for EVs in segments such as e-autos and e-taxis. These vehicles travel between 100 km and 200 km per day on average, and converting them to EVs can accelerate the number of electrified kilometres traveled.

⁹ Hardman, Scott. 2019. Understanding the Impact of Reoccurring and Non-Financial Incentives on Plug-in Electric Vehicle Adoption – A Review. Plug-in Hybrid and Electric Vehicle Research Center, Institute of Transport Studies, University of California Davis. Working Paper.

¹⁰ https://www.business-standard.com/article/economy-policy/centre-advises-state-govts-to-exempt-evs-from-permit-requirements-119071901531_1.html

Figure 5: Ultra low emission zone (ULEZ) in London



Source: Associated Press

Green zones

Green zones, as referred to in state EV policies, are equivalent to low-emission or zero-emission zones, where the movement of polluting vehicles is restricted or penalized with an emission charge.

Which states are using it?

- Kerala's policy encourages the establishment of EV zones in environmentally fragile regions such as Munnar.
- Andhra Pradesh and Punjab have mandated green zones as a strategic measure in target cities for e-mobility.

Another example of a green zone includes Uttar Pradesh's green bus routes, which will be identified within the state's model electric mobility cities and ensure 70% electric vehicles in public transportation along these routes. While not the same instrument, this is similar to lane priority offered for EVs in the U.S., where single-occupant EVs are permitted to use the high-occupancy lanes on highways in states such as New York and California.

LONDON'S ULTRA LOW EMISSION ZONE (ULEZ)

The ultra low emission zone (ULEZ) covers a significant (and expanding) part of central London. Drivers of older, polluting cars pay a daily charge of GBP 12.50 for entering the ULEZ¹¹.

¹¹ <https://tfl.gov.uk/modes/driving/ultra-low-emission-zone>

Parking incentives

Parking incentives include the waiver of parking charges for electric vehicles in public parking areas and/or the provision of reserved parking spots, often equipped with EV charging points. They make it easier for EV owners to find parking and reduce associated parking costs of using a personal vehicle, especially in dense urban areas.

Which states are using it?

- Kerala and Madhya Pradesh provide an exemption from parking charges for EVs.
- Punjab offers reserved EV parking slots in public parking spaces across “target cities” and will provide designated street parking spots equipped with street-pole charging.
- Telangana aims to provide preferential parking slots with the required charging infrastructure for EVs.

Cities with unorganized parking can work towards enacting parking policies, with reserved and/or free parking for EVs. For cities with parking policies, a mandate for reserved EV parking can be integrated with the provision of public charging points.

GLOBAL USE OF EV PARKING BENEFITS

Parking benefits such as free and discounted parking for EV users, integrated with EV charging in some cases, is allowed in certain public locations in China, South Korea, France, Germany, Italy, Norway, Spain, Sweden, and the United Kingdom. In Seoul, EV users have access to free parking along with free public charging facilities. In China, cities such as Nanchang have halved the fees for parking on streets or in public lots.

Toll fee waivers

These waivers exempt EV users from the payment of standard toll fees, typically for intercity or regional trips. Like parking incentives, they help reduce operational costs of EVs. With toll fees on national highways in India exceeding INR 1 per km, this amounts to significant savings on longer-distance trips.

Which states are using it?

- Punjab and Bihar offer toll fee waivers for EVs on select state highways.

With the benefits of toll fee waivers likely to be realized on longer, interstate trips, this incentive will be optimally effective only when adopted by neighbouring states.

RECOMMENDATIONS FOR EFFECTIVE DEMAND CREATION

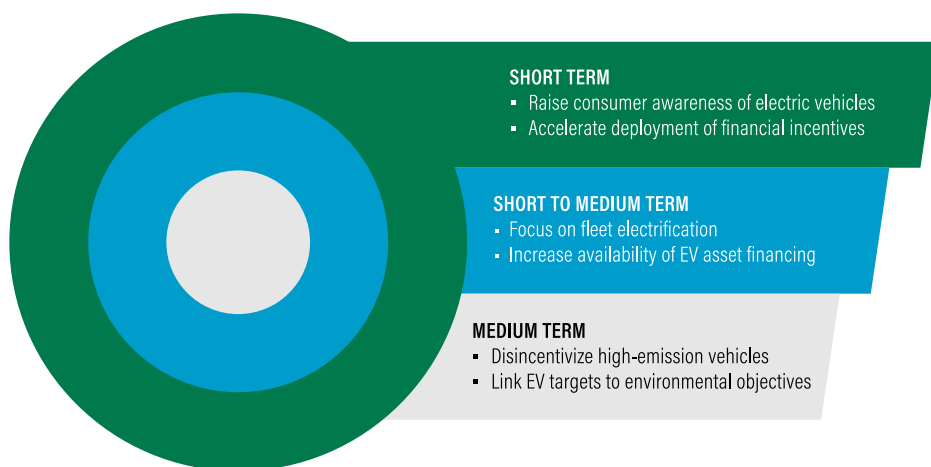
State EV policies have outlined a good mix of demand incentives for promoting EV adoption in their regions. Financial incentives will play an outsized role in demand creation for EVs, at this early stage of the sector's development. The road tax exemptions are a robust complement to the FAME-II purchase 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 ICE vehicles are expected to be highly impactful in promoting a steady conversion of commercial vehicles to electric. This is significant, as light commercial vehicles are primed for electrification due to favorable economic viability of EVs in these segments¹². States have not capitalized on the readiness of this segment, with very few incentives for commercial fleets.

And finally, 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. As states look ahead toward accelerating EV adoption, given below are some recommendations on how demand incentives might be supplemented or further sharpened for greater efficacy.

Recommendations are categorized by priority as shown in Figure 6, with short-term measures to be implemented in the next one to two years, and medium-term measures over three to five years.

Figure 6: Priority actions for accelerating EV adoption



1 Raise consumer awareness: As EVs become more competitive against conventional ICE vehicles on aspects such as cost and performance, one of the biggest hurdles to their mainstreaming is the lack of consumer awareness about EV technology. States should take a proactive approach to raise consumer awareness and experience of EVs and available incentives, through information campaigns and public demonstrations. Delhi's 2021 "Switch Delhi" campaign is a good example of such an initiative.

¹² Kumar, Parveen & Kanuri, Chaitanya. October 2020. Total cost of ownership of electric vehicles: Implications for policy and purchase decisions. Blog by WRI India. Available at: <https://wri-india.org/blog/total-cost-ownership-electric-vehicles-implications-policy-and-purchase-decisions>

GO ULTRA LOW CAMPAIGN

Go Ultra Low¹³ is a joint government and industry campaign in the United Kingdom, aimed at educating and informing citizens about electric vehicles, and providing useful information on owning and operating an EV. Supported by the Office of Low Emission Vehicles, the campaign counts all major auto manufacturers among its partners.

2 Accelerate the deployment of financial incentives: The delay from policy notification to implementation observed in states is a major barrier to the success of state actions for transport electrification. States must accelerate the execution of the road tax exemption in particular, to gain the necessary momentum for EV adoption. Single-window mechanisms to avail of incentives, and clarity on redemption processes, will go a long way in creating a seamless experience for EV buyers.

3 Focus on fleet electrification: Commercial operators of passenger and cargo fleets will be important stakeholders in spearheading the EV transition. Fleet conversion mandates, service tax exemptions and permit waivers can boost EV adoption in commercial segments. For example, Andhra Pradesh's suggested SGST exemption for vehicle leasing and taxi services would help service providers save 2.5% on operational costs.

State governments themselves deploy large numbers of vehicles for institutional use. Accelerating government fleet electrification through mandates and incentives is within the control of states and can provide the necessary stimulus for EV adoption at large. This is seen in Delhi's EV policy, which has mandated the electrification of the entire government car fleet within a year from the time of policy notification.

4 Increase availability of EV asset financing: As private banks and non-banking financial companies (NBFCs) take a cautious approach to commercial EV financing, government action is instrumental in increasing the flow of debt financing for EVs. At the central level, including electric vehicles as a priority lending sector can help increase available capital and improve financing terms. At the subnational level, states can help fill the gap through state financial corporations to provide EV loans on favorable terms, as demonstrated by Delhi's initiative to provide loans through the DFC.

INTEREST-FREE EV LOANS

Scotland's low-carbon transport loan¹⁴ scheme offers interest-free loans of up to £120,000 to Scottish businesses to purchase new or used electric vehicles, including e-motorcycles and scooters, e-cars and vans, and electric goods vehicles.

¹³ <https://www.goultralow.com/>

¹⁴ <https://energysavingtrust.org.uk/grants-and-loans/low-carbon-transport-business-loan/>