



ANALYSIS OF
**STATE ELECTRIC VEHICLE
POLICIES AND THEIR IMPACT**



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About Climate Trends

Climate Trends is a research-based consulting and capacity building initiative that aims to bring greater focus on issues of environment, climate change and sustainable development. We specialise in developing comprehensive analyses of complex issues to enable effective decision making in the private and public sector.

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The role of transport decarbonisation in global climate action is gaining attention, as governments around the world are implementing supportive policies to phase out Internal Combustion Engines and push for Zero Emission Vehicles. With several countries, including India, committing to achieve net zero emissions before or by 2070, transitioning the transport sector to zero emission technologies is now inevitable as this is the fastest growing sector in terms of energy use. **More than 66 country governments have national or regional ICE phase out targets, and more than 200 stakeholders, including India, have joined the world's largest transport coalition – Accelerating to Zero – where they have committed to ensure that all sales of new cars and vans are zero emission globally by 2040.**

India has made notable progress towards accelerating e-mobility in the country. Along with the national level FAME II scheme, 26 States have also released electric vehicle policies that aim to increase EV adoption and encourage manufacturing of EVs and its components. Towards this, these policies offer a range of incentives to create EV demand, increase manufacturing and build charging infrastructure. **Of these 26 State EV policies, 16 policies were launched between 2020 and 2022, eight have been active for two years or more, and one state policy, Goa, has been discontinued.**

The success of these state policies in accelerating transport electrification will be key for India to achieve its Nationally Determined Contributions and Long Term Low Emissions Development Strategy, both of which focus on transport decarbonisation. Therefore, it is important to assess the design and implementation of these policies and take stock of their impact so far.

To that end, this analysis assesses the comprehensiveness of state EV policies based on the various incentives they offer, draws a comparison among all policies to facilitate peer to peer learning, and also assesses the impact of state policies that have been active for two years or more. **This analysis aims to support states in identifying important gaps in their policies, and provide recommendations to address these when these policies are revised.**

For this assessment, we have defined 21 parameters that can largely be divided across the following categories. Policies have been scored on the basis of each parameter to draw inferences on their comprehensiveness, strengths and areas of improvement.



A Parameters for Assessment



EV Targets and Budgets

- Defined target for sales penetration and/or investments and/or charging infrastructure
- Specific budget allocated for dispersing incentives such as State EV Fund



Demand Side Subsidy for Consumers

- Subsidy support for consumers for 2, 3 4 wheeler EVs in addition to FAME II
- Road tax and registration fee exemptions
- Subsidy for e-buses in addition to FAME II.
- Subsidy for tractors, e-cycles, strong hybrid vehicles.
- Financing support through Interest Subvention (Subsidy offered on interest rates)
- Scrappage incentive
- Retrofitment incentive
- Electricity tariff benefits for consumers



Industry Incentives

- Manufacturing incentives
- Research and Development incentives or funds
- Charging infrastructure incentives
- Focus on battery recycling
- Employment generation incentives
- Focus on skill development
- Promotion and creation of Green Zones



Focus on Fleets, Job Creation and Charging Infrastructure Mandates

- Formation of State EV Cell or Steering Committee responsible for overseeing EV growth
- Specific targets for fleet electrification
- Targets or focus on job creation
- Mandates for charging infrastructure



Parameters	Launch date	EV targets and budgets		Demand side incentives								Industry incentives						Others				
		Defined target for sales penetration and/or investments and/or charging infrastructure	Specific budget allocated for dispersing incentives such as State EV Fund	Subsidy support for consumers for 2, 3 4 wheelers EVs in addition to FAME II	Subsidy for e-buses in addition to FAME II	Subsidy for tractors, e-cycles, strong hybrid vehicles	Road tax and registration fee exemptions	Financing support through Interest Subvention (Subsidy offered on interest rates)	Vehicle scrappage incentive	Retrofitment incentives	Electricity tariff benefits for consumers	Manufacturing incentives	Research & Development fund	Focus on battery recycling	Employment generation incentive	Focus on skill development	Charging infrastructure support	Promoting & creation of Green Zones	Formation of State EV Cell or Steering Committee responsible for overseeing EV growth	Specific targets for fleet electrification	Targets or focus on job creation	Mandates for charging infrastructure in housing, building, commercial complex etc
States											Slab 1	Slab 2	Slab 3									
Maharashtra	Jun 2021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Haryana	Jul 2022	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Uttar Pradesh	Sep 2022	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Delhi	Aug 2020	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Punjab (draft)	Aug 2022	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Odisha	Feb 2021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Rajasthan	Sep 2022	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Tamil Nadu	Sep 2019	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Andhra Pradesh	Jun 2018	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Chandigarh	Feb 2022	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Jharkhand	Oct 2022	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Bihar	Jun 2019	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Karnataka	Sep 2017	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Meghalaya	Feb 2021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
West Bengal	Jun 2021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Telangana	Oct 2020	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Assam	Jul 2021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Chhattisgarh	Apr 2022	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Madhya Pradesh	Nov 2019	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Andaman & Nicobar (draft)	Mar 2022	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Gujarat	Jun 2021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Ladakh	Aug 2022	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Kerala	Mar 2019	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Uttarakhand	Dec 2022	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Himachal Pradesh	Dec 2021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Manipur	Nov 2022	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Arunachal Pradesh (draft)	Dec 2021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Goa		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

Note: Slab 1 – States extending support as per the State Industrial policy. Slab 2 and 3 – State extending support as per Industrial policy along with special incentives for EV investments. Differentiation between these two slabs has been made based on the quality of additional EV investments.



Key Findings

Top states with the most comprehensive policies

- ⚡ **Maharashtra, Haryana, Delhi and Uttar Pradesh** have the widest range of parameters included in their policies, making them the most comprehensive policies.
- ⚡ **Punjab** follows at a close second.

States with the least holistic policies

- ⚡ **Arunachal Pradesh's** policy covers only three out of the 21 defined parameters, making it the least holistic policy.
- ⚡ This is followed by **Manipur and Himachal Pradesh** covering five and six parameters respectively.
- ⚡ **Ladakh, Kerala and Uttarakhand** covering only seven parameters.

States with strongest demand side incentives

- ⚡ **Delhi, Odisha, Bihar, Chandigarh and Andaman & Nicobar** have the widest range of demand side incentives for consumers, including road tax and registration fee exemption, subsidy on upfront cost of 2, 3, 4 wheelers and buses in addition to FAME II, retrofitment or scrappage incentives, electricity tariff incentives for charging.
- ⚡ **Maharashtra, Haryana, Rajasthan and Meghalaya** follow close with five of the eight parameters considered under this category of incentives.

States with weakest demand side incentives

- ⚡ **Andhra Pradesh, Arunachal Pradesh and Manipur** offer only one form of demand side incentive. Andhra Pradesh & Manipur offer only road tax and registration fee exemption and Arunachal Pradesh offers subsidy on 2, 3, 4 wheeler.
- ⚡ **Karnataka, Himachal Pradesh, Tamil Nadu, Gujarat, Madhya Pradesh and Kerala** offer only two of the eight parameters considered under this category of incentives.



States with strongest incentives to attract EV investments

- ⚡ **Tamil Nadu, Haryana and Andhra Pradesh** have the strongest supply side incentives, with special incentives to boost manufacturing in the state, apart from incentives offered in the state's industrial policy. These states also offer incentives for charging infrastructure development, skill development support, employment incentives as well as a special fund to encourage research and development in the state.
- ⚡ **Punjab and Uttar Pradesh** follow at a close second.

6 states out of 27 have allocated budgets to disperse incentives:

Maharashtra, Delhi, Uttar Pradesh, Rajasthan, Meghalaya, Gujarat

8 states have specific targets for electrification of fleets such as last mile delivery vehicles, aggregator cabs, government vehicles, etc.:

Maharashtra, Delhi, Haryana, Karnataka, Assam, Madhya Pradesh, Manipur, Andaman & Nicobar

6 states have defined targets for job creation in the EV sector:

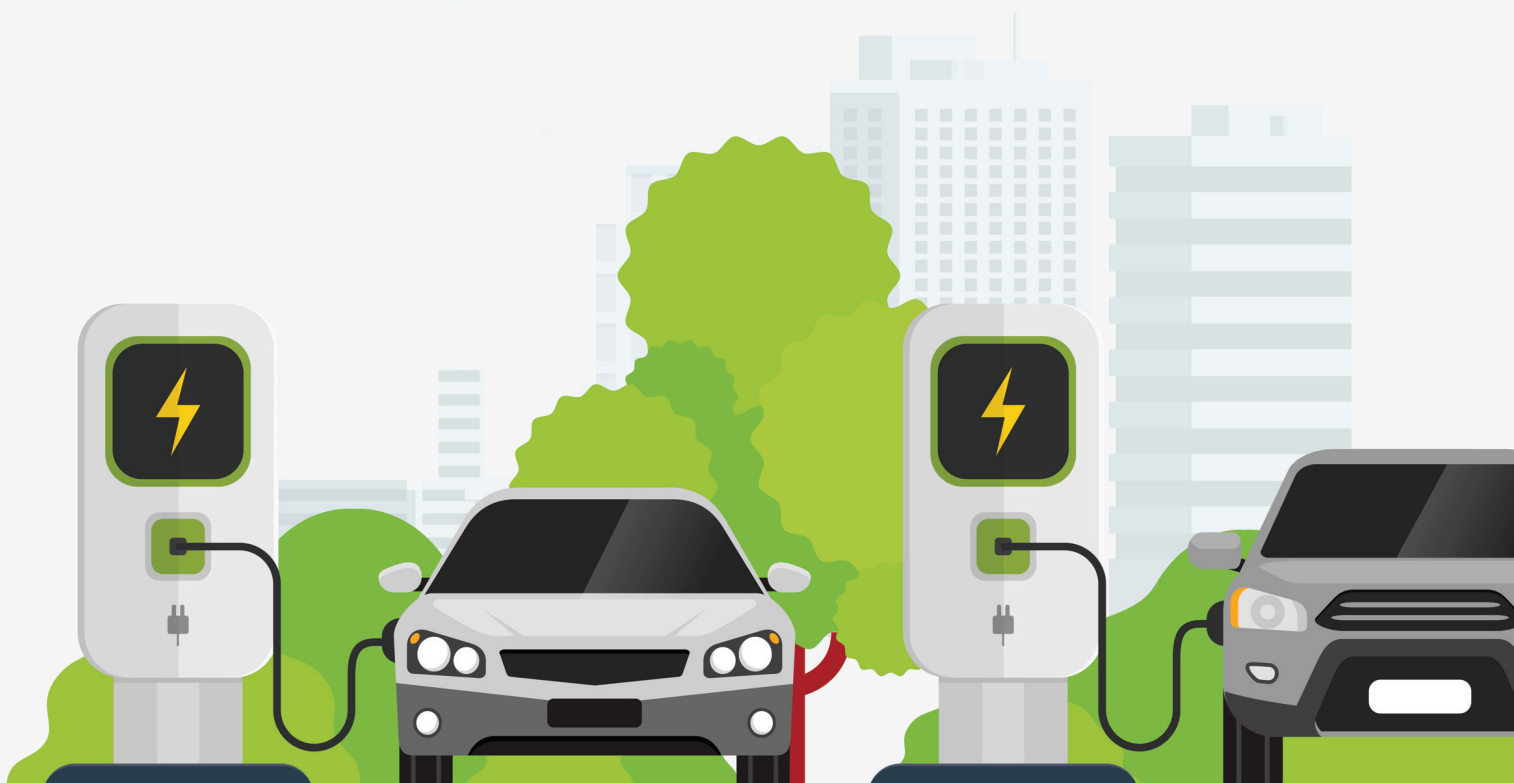
Andhra Pradesh, Telangana, Tamil Nadu, Bihar, Karnataka, Himachal Pradesh

9 states have mandated the creation of charging infrastructure in new residential buildings, offices, parking lots, malls, etc.:

Chandigarh, West Bengal, Andhra Pradesh, Tamil Nadu, Odisha, Delhi, Maharashtra, Meghalaya, Ladakh

3 states offer interest subvention on loans taken for EVs through specific financial institutes: Delhi, Odisha, Bihar

Arunachal Pradesh is the only state with no defined target for EV sales, manufacturing or charging infrastructure.





IMPACT OF STATE POLICIES RELEASED IN OR BEFORE 2020

Eight states released their policies before October 2020, and have been in circulation for two years or more - **Andhra Pradesh, Bihar, Karnataka, Kerala, Madhya Pradesh, Tamil Nadu, Telangana and Delhi.**

We assessed the impact of these policies against the targets defined for electric vehicle penetration, creation of charging infrastructure and attracting investments through manufacturing.

i Electric Vehicle Penetration

As of December 2022, none of the 8 states have achieved their EV penetration targets for specific years, as shown in [Table 1](#).



- ⚡ **Madhya Pradesh** aims for 25% of all new registered vehicles to be electric by 2026, but its current EV penetration stands at 2.2% of total vehicle sales since policy launch.
- ⚡ **Delhi** aims for 25% of all new registered vehicles to be electric by 2024. Although the city has the highest number of EVs in the country, its penetration is still only 7.2% of total registered vehicles.
- ⚡ **Kerala, Andhra Pradesh, and Karnataka** have targets in terms of absolute numbers, and none are on track to meet their figures.
- ⚡ **Bihar** is the only state that has achieved its overall EV penetration target of 1,00,000 EVs by 2024. However, this is mostly due to an increase in sales of EV three wheelers. All other vehicle segment targets such as two wheeler, four wheeler and e-buses are far behind.
- ⚡ **Tamil Nadu** has no defined EV penetration, but our calculations show that Tamil Nadu EV penetration stands at 2.02% of the registered vehicles respectively. Tamil Nadu aims to convert 5% of buses to electric every year till 2030, but the state has no e-buses as of today.

ii Charging Infrastructure Targets

- ⚡ None of the states are on track to meet their charging infrastructure targets, with **Kerala and Madhya Pradesh** already missing their 2022 target.
- ⚡ **Delhi**, with the highest number of charging stations in the country, has only achieved 9.67% of its charging infrastructure target of 30,000 charging stations by 2024.
- ⚡ **Tamil Nadu** has no charging infrastructure target but their current charging station ratio stands at 1 public charger per 386 EVs for Tamil Nadu.



iii Investment Targets

Only five of the eight states have defined investment targets.

- ⚡ **Karnataka** has missed its 2022 target by 34%.
- ⚡ **Andhra Pradesh** has achieved roughly 33% of its target by 2022, leaving close to two third to be achieved in just 2 years before the policy ends by 2024.
- ⚡ **Tamil Nadu**, with the highest investments in India in the e-mobility sector, has achieved 64% of its target over 4 years.
- ⚡ **Bihar** has a target of ₹2500 crore but data is not publicly available on the e-mobility investment status in the state.



iv Green Zones

Seven states aimed to create green zones either under their Smart Cities Initiative or in the pilot e-mobility cities. 'Green zones' are defined as areas where the entry of fossil fuel powered vehicles is restricted, thereby making them zero emission zones. Only zero emission vehicles such as EVs, cycle rickshaws and cycles would be allowed.



As of November 2022, none of these states have implemented Green Zones. Some cities in Karnataka and West Bengal have prepared proposals but there is no action on ground. As a show of support to electric vehicles, Bangalore has recently allowed the use of EVs on weekends on Church Street, which has banned vehicle use since 2020 as part of the Clean Air Street initiative.

v Status of E-mobility in Pilot Cities in States

The EV policies of six states focus on building the e-mobility ecosystem in pilot cities, with defined targets for EV penetration, charging infrastructure and electrification of public transport such as buses. As shown in Table 4 below, none of the targets in the pilot cities have been met.



Table 1: Electric Vehicle targets as per state policies and their current status

S. No.	State	EV Penetration Target	Status as on November 2022
1.	Andhra Pradesh	10,00,000 EVs by 2024	27,662 units of EVs 2.7% of target
2.	Bihar	1,00,000 EVs by 2024 2W - 24,000; 3W - 70,000; 4W - 4,000; E-bus - 1,000	1,08,217 units of EVs 2W - 13,039; 3W - 94720; 4W - 238; E-bus - 27
3.	Karnataka	1,500 e-buses by 2022	357 e-buses
4.	Kerala	By 2022, 2W - 2,00,000; 3W - 50,000; goods carrier - 1,000 By 2025, e-Bus - 6,000	50,348 units of EVs 2W - 36,573; 3W - 4010; 4W - 5699; Buses - 56
5.	Madhya Pradesh	25% of all new registered vehicles by 2026	9,638 units of EVs 2.2% of total vehicle sales since policy launch
6.	Tamil Nadu	No EV penetration target e-Bus: Electrify 5% of buses every year by 2030	99,022 units of EVs 2.02% of total registered vehicles are EVs Zero e-buses
7.	Telangana	No penetration target	-
8.	Delhi	25% of all new vehicle registrations are EVs by 2024 Buses 1,000 by 2020	83,300 units of EVs 7.2% of all new registered vehicles since 2020 Buses - 423
9.	Uttar Pradesh (First launched in August 2019. Discontinued in October 2022 and new policy launched in September 2022)	10,00,000 EVs by 2024; 1000 electric buses; 70% EV public transportation on identified green routes in identified 10 EV cities by 2030	2,78,218 EVs 27.82% of target 632 Buses

Source: Sales figures for each state is listed from Vahan

Note: The complete data of Telangana is not available in Vahan4 hence they are not included.

Table 2: Charging Infrastructure targets in state EV policies versus status of charging infrastructure on-ground

S. No.	State	Target	Status as on November 2022 based on publicly available data
1.	Andhra Pradesh	1,00,000 slow and fast charging stations by 2024	99
2.	Bihar	250 charging stations by 2024	20+
3.	Karnataka	No charging infrastructure target	500+
4.	Kerala	400 charging stations by 2022	413
5.	Madhya Pradesh	400 charging stations by 2022	70+
6.	Tamil Nadu	No charging infrastructure target	256
7.	Telangana	No charging infrastructure target	300+
8.	Delhi	30,000 by 2024	2900, 9.67% of target
9.	Uttar Pradesh	2,00,000 slow and fast charging, swapping stations by 2024	95+, status as of Nov 2022 from the day of policy launch

Note: All data is for public and semi public charging stations.

Source: <https://evyatra.beeindia.gov.in/public-charging-stations>; <https://nexonev.tatamotors.com/charging-locator/>

Delhi: <https://timesofindia.indiatimes.com/city/delhi/delhi-gets-11-cheaper-ev-charging-stns/articleshow/94951197.cms>

Telangana: <https://www.newindianexpress.com/states/telangana/2022/aug/31/1000-ev-charging-stations-to-co-me-up-across-telangana-under-ppp-mode-2493252.html#:~:text=At%20present%2C%20around%2032%2C000%20electric,stations%20are%20being%20set%20up.>

<https://www.thehindu.com/news/cities/Hyderabad/space-for-ev-charging-stations-in-tsiic-facilities-sought/article66145212.ece#:~:text=A%20total%20of%20292%20EV,stations%20and%20in%20tourist%20areas.>

Tamil Nadu: <https://www.news18.com/news/auto/tamil-nadu-to-float-tenders-for-ev-charging-stations-at-100-sp-ots-across-highway-5772793.html>

Kerala: <https://www.thehindu.com/news/national/kerala/145-ev-charging-stations-getting-ready-in-thiruvananthapuram/article65612978.ece>; <https://www.thehindu.com/news/national/kerala/145-ev-charging-stations-inaugurated-in-capital-district/article65891045.ece>

Karnataka: <https://evjagruthi.karnataka.gov.in/>

Table 3: Investment targets in EV sector versus status of actual investments

S. No.	State	Target	Status as on December 2022 based on publicly available data
1.	Andhra Pradesh	₹30,000 crore by 2024	₹10,400 crore, roughly 33% of target
2.	Bihar	₹2,500 crore	Data not publicly available
3.	Karnataka	₹31,000 crore by 2022	₹22,419 crore
4.	Kerala	No target	
5.	Madhya Pradesh	No target	
6.	Tamil Nadu	₹50,000 crore by 2025	₹31,960 crore
7.	Telangana	₹33,000 crore	₹5147 crore
8.	Delhi	No target	
9.	Uttar Pradesh (2019-2022 Policy)	₹40,000 crore by 2024	NA (No investment yet - during the previous EV policy)

Source: Andhra Pradesh: <https://www.thehindubusinessline.com/news/hero-motocorp-to-invest-1600-cr-in-ap-facility-foundation-stone-laid/article23336516.ece#:~:text=The%20Chittoor%20plant%20is%20to,million%20units%20over%20multiple%20phases.>

<https://www.thehindubusinessline.com/news/avera-set-to-open-50-cr-e-scooter-plant-in-ap/article24116389.ece>

https://www.business-standard.com/article/companies/kinetic-green-plans-rs-1-750-crore-investment-in-andhra-pradesh-121100101347_1.html

<https://www.deccanherald.com/national/south/amara-raj-intends-to-invest-rs-9500-crore-in-telangana-1167978.html>

https://www.business-standard.com/article/pti-stories/munoth-ind-to-invest-rs-799-cr-for-making-lithium-ion-batteries-in-india-118061301364_1.html

Karnataka: <https://www.livemint.com/news/india/karnataka-approves-ev-manufacturing-projects-of-nearly-rs-23-000-cr-11608565430950.html>

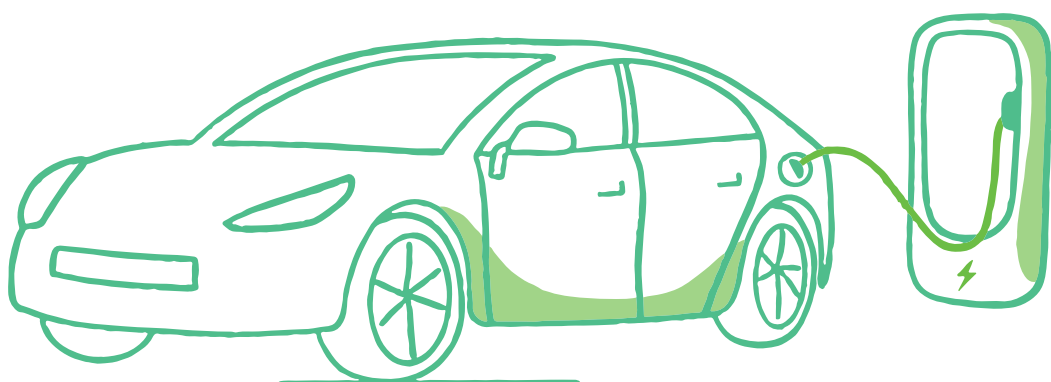
Tamil Nadu: <https://timesofindia.indiatimes.com/business/india-business/indias-ev-space-to-see-investments-worth-rs-94000-cr-tamil-nadu-to-lead-with-34-share/articleshow/88383183.cms>

Telangana: <https://telanganatoday.com/electric-vehicle-sector-thriving-in-telangana>



Table 4: Pilot cities in states, their EV ecosystem target and current status on-ground

S. No.	State and Pilot Cities	Target	Current Status as on December 2022
1.	Andhra Pradesh – Vijayawada – Vishakhapatnam – Amaravati – Tirupati	<ul style="list-style-type: none"> • Convert 100% of all commercial & logistics fleets to electric fleet by 2024, including government organization, APSRTC, educational institutes, hospitals or corporates and other institutions. • 100 DC public charging stations per city. • Designing of Green zones 	<ul style="list-style-type: none"> • Buses: 10 e-buses in Tirupati and 10 e-buses under APSRTC • 20 battery swapping stations in Tirupati • No green zones created
2.	Bihar – Bodhgaya – Rajgir	<ul style="list-style-type: none"> • 100% EV city or Zero Emission zone in both cities by 2024 	
3.	Karnataka – Bangalore (Vaayu Vajra)	<ul style="list-style-type: none"> • Implement e-bus programme in Vaayu Vajra 	<ul style="list-style-type: none"> • No e-bus deployed as yet
4.	Kerala – Kovalam – Munnar – Trivendrum/Kochi – Kozhikode	<ul style="list-style-type: none"> • 20 Public Charging Stations each and 150 swapping outlets for 2/3 Wheelers to be set up in the initial pilot cities by KSEB 	<ul style="list-style-type: none"> • Kozikode: 148 PCS: Pole mounted as per KSEB; 10 Swapping station • Kochi: 15 PCS • Trivendrum: 10 swapping station in
5.	Madhya Pradesh – Bhopal – Indore – Jabalpur – Gwalior – Ujjain	<ul style="list-style-type: none"> • 100% electric buses by 2028, with the first phase of 100% conversion of bus fleet in top 5 cities by 2026. • Creation of e-zones • Cities will develop specific goals of charging infrastructure density within a defined timeline linked to target for deployment of EVs. 	<ul style="list-style-type: none"> • 40 e-buses in Indore and 11 e-buses in Bhopal • No further actions plans yet
6.	Tamil Nadu – Chennai – Coimbatore – Trichy – Madurai – Salem – Tirunelveli		





PARAMETERS

- ⚡ **Defined Targets for EV Penetration, Charging Infrastructure and Investments**
- ⚡ **Specific Budget Allocated for Disbursing Incentives**
- ⚡ **Subsidy Support for Consumers for 2, 3, 4 wheelers EVs in addition to FAME II**
- ⚡ **Road Tax and Registration Cost Exemption Subsidy for E-buses in Addition to FAME II**
- ⚡ **Subsidy for Other Segments such as Tractors, E-cycles, Strong Hybrids**
- ⚡ **Financing Support through Interest Subvention (subsidy offered on interest rates)**
- ⚡ **Scrappage Incentive**
- ⚡ **Retrofitting Incentive**
- ⚡ **Electricity Tariff Benefits to Consumers**
- ⚡ **Manufacturing Incentives**
- ⚡ **Research and Development Fund**
- ⚡ **Charging Infrastructure Incentive**
- ⚡ **Focus on Battery Recycling**
- ⚡ **Employment Generation Incentives**
- ⚡ **Promotion and Creation of Green Zones**
- ⚡ **Focus on Skill Development**
- ⚡ **State EV Cell or Steering Committee Responsible for Implementation**
- ⚡ **Targets for Fleet Electrification**
- ⚡ **Focus on Job Creation**
- ⚡ **Mandates for Charging Infrastructure**

Parameter 01 DEFINED TARGETS FOR EV PENETRATION, CHARGING INFRASTRUCTURE AND INVESTMENTS

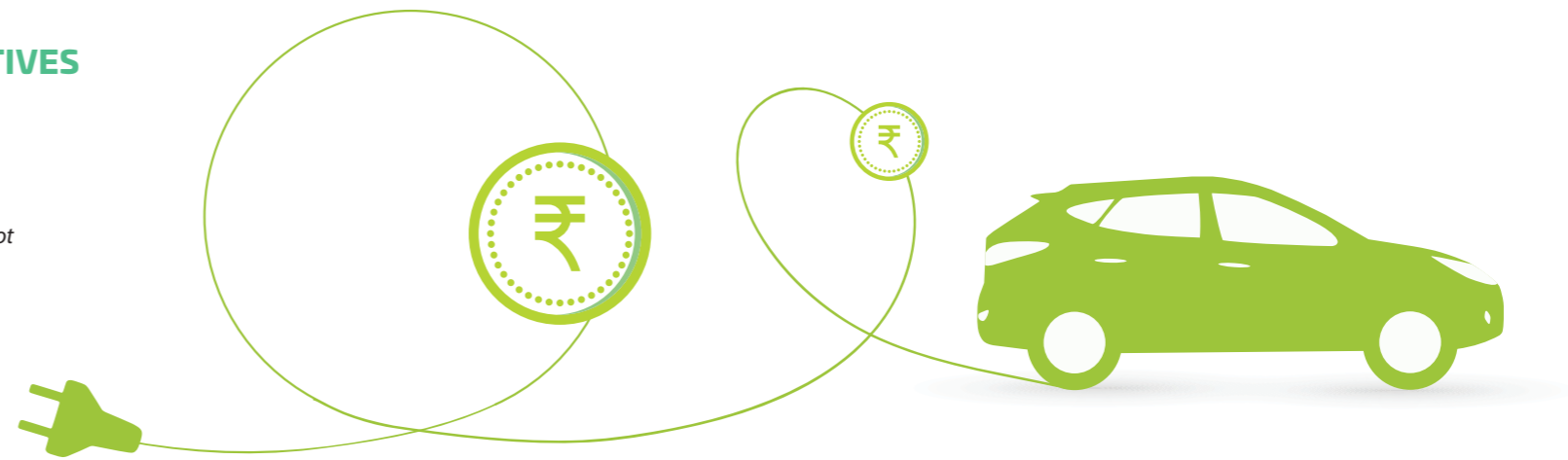


State	EV Penetration Target	Charging Infrastructure Target	Investment Target
Maharashtra (2021-2025)	<ul style="list-style-type: none"> 10% of all new registered vehicles to be electric by 2025 15% of state transport buses to be electrified 25% of public transport and last mile delivery vehicles to be electric in the top 5 cities 	2500+ charging stations in top 5 cities by 2025	One Gigafactory for manufacturing of advanced chemistry cell (ACC) batteries
Haryana (2022-2027)	<ul style="list-style-type: none"> 100% electrification of public transport buses by 2029, starting with cities like Gurgaon and Faridabad by 2024 100% EVs in the Government fleet and logistics companies by 2030 	NA	NA
Uttar Pradesh (2022-2027)	<ul style="list-style-type: none"> 2W - 2,00,000 3W - 50,000 4W - 25,000, E-bus - 400 100% government fleets to be electric 	2000 charging stations	NA
Delhi (2020-2024)	<ul style="list-style-type: none"> 25% of all new vehicles registered to be electric All delivery service providers shall be expected to convert 50% of their fleet operating in Delhi to electric by 31st March, 2023 and 100% by 31st March, 2025 	30,000 charging stations	
Punjab (2022-2025) Draft	<ul style="list-style-type: none"> 25% of annual registered vehicles to be electric by 2027 		
Odisha (2021-2025)	<ul style="list-style-type: none"> 20% of all new registered vehicles to be electric by 2025 		
Rajasthan (2022-2027)	<ul style="list-style-type: none"> 2W - 15% or all new vehicles or 1,00,000 EVs 3W - 30% or 50,000 vehicles 4W - 5% or 4,000 vehicles E-bus - 500 buses 	NA	
Tamil Nadu (2019-2029)			₹50,000 cr
Andhra Pradesh (2018-2023) Draft	<ul style="list-style-type: none"> 10 lakh EVs by 2024 To delpy 11,000 e-buses 	1,00,000 charging station by 2024	₹32,000 cr
Chandigarh (2022-2027)	<ul style="list-style-type: none"> 70% of new vehicle registrations by the end of policy period 2W - 10,000 3W - 20,000 4W - 2,000 	30,100 charging stations	
Jharkhand (2022-2027)	<ul style="list-style-type: none"> 10% of all new registered vehicles to be electric All vehicles: 10%, 2 wheelers: 10%, 3 wheelers: 20%, 4 wheelers: 10% 15% of state transport vehicles to be electrified 	16,000 charging stations	NA
Bihar (2020-2024)	<ul style="list-style-type: none"> 1,00,000 EVs by 2024 2W: 24,000 3W: 70,000 4W: 4,000 Buses: 1,000 		₹2,500 cr
Karnataka (2017-2022 or till new policy is announced)	<ul style="list-style-type: none"> 100% of the vehicles used for deliveries be electrified 1,500 electric buses to be implemented on KSRTC, BMTC 	NA	₹31,000 cr
Meghalaya (2021-2025)	<ul style="list-style-type: none"> 15% of all new registered vehicles or 20,000 vehicles to be electric by 2025 		
West Bengal	<ul style="list-style-type: none"> 10,00,000 EVs 	1,00,000 charging stations	
Telangana (2020-2030)			₹33,000 cr
Assam (2021-2025)	<ul style="list-style-type: none"> 2,00,000 EVs on road or 25% of all new registered vehicles to be electric 		
Chhattisgarh (2022 to 2027)	<ul style="list-style-type: none"> 15% of all new registered vehicles or 2,00,000 EVs on road by 2027 2W: 169,000 3W: 17,000 4W (non-commercial): 12,000 4W commercial: 1,100 Buses: 900 		
Madhya Pradesh (2019-2024)	<ul style="list-style-type: none"> 25% of all new registered vehicles to be electric by 2026 Conversion all the transport buses to electric by 2028, and starting with the top 5 cities like Bhopal, Indore, Ujjain, Gwalior & Jabalpur by 2026 100% EVs in the fleet and logistics by 2030 	NA	NA
Andaman & Nicobar (Draft) (2022-2027)	<ul style="list-style-type: none"> 30% of new vehicles to be EVs by Dec 2026 Convert 50% of existing and new bus fleet to electric by year 2026 	200 charging stations	
Gujarat (2021-2024)	<ul style="list-style-type: none"> 2,00,000 lakh EVs 2W: 1,10,000 3W: 70,000 4W: 20,000 		
Ladakh (2022-2027)	<ul style="list-style-type: none"> 622 EVs 		
Kerala (2019-2022)	<ul style="list-style-type: none"> 10,00,000 EVs on road by 2022 along with a pilot of 2,00,000 EVs: 2W: 50,000 3W: 3,000 buses 1,000 goods carrier and 500 ferry boats to be implemented by 2020 	20 charging stations and 150 swapping outlets for 2/3 wheelers to be set up in the initial pilot cities by KSEB; 400 charging stations by 2022; At least 1 charging station in a grid of 3 x 3 Km in major cities	NA
Uttarakhand (2018-2023)	<ul style="list-style-type: none"> 1,00,000 EVs by 2023 		
Himachal Pradesh (2022-2027)	<ul style="list-style-type: none"> 15% of new vehicles to be EVs by 2025 	At least 1 charging station/point within every 1km x 1km grid in four model cities - Shimla, Mandi, Baddi and Dharamshala.	
Manipur (2022-2026)	<ul style="list-style-type: none"> 20% EVs by 2026 		
Goa	<ul style="list-style-type: none"> Policy Discontinued 		

Parameter 02 SPECIFIC BUDGET ALLOCATED FOR DISBURSING INCENTIVES

Maharashtra	₹930 cr
Gujarat	₹870 cr
Uttar Pradesh	₹410 cr
Delhi	₹100 cr
Rajasthan	₹40 cr
Meghalaya	₹25.42 cr

All values are in INR
For other states with subsidies, the budget is not disclosed publicly



Parameter 03 SUBSIDY SUPPORT FOR CONSUMERS FOR 2, 3, 4 WHEELER EVS IN ADDITION TO FAME II

₹10,000/- per kWh of battery capacity	₹10,000/- per kWh of battery capacity with upper CAP of subsidy	₹10,000/- per kWh of battery capacity with upper CAP for vehicle cost	₹5,000/- per kWh of battery capacity with upper CAP of subsidy	₹4,000/- per kWh Maximum (with upper CAP for vehicle cost)	₹3,000/- per kWh of battery capacity with upper cap to subsidy	Direct subsidy
<p>Andhra Pradesh 2W: ₹30,000 per vehicle max 3W: ₹50,000 per vehicle max 4W: ₹2 lakh per vehicle max</p> <p>Bihar 2W: ₹20,000 per vehicle max 3W: ₹50,000 per vehicle max 4W: ₹1.5 lakh per vehicle max</p> <p>Andaman & Nicobar 2W: ₹20,000 per vehicle max 3W: ₹30,000 per vehicle max 3W Eric/cart: ₹25,000 per vehicle max 4W: ₹1 lakh per vehicle max</p>	<p>Gujarat Subsidy: Subsidy amount not be exceeded to 40% of vehicle cost 2W: Max vehicle ex-factory cost to be ₹1.5 lakh 3W: Max vehicle ex-factory cost to be ₹5 lakh 4W: Max vehicle ex-factory cost to be ₹15 lakh</p>	<p>Assam 2W: ₹20,000 per vehicle max, max vehicle ex-factory cost to be ₹1.5 lakh 3W: ₹50,000 per vehicle max, max vehicle ex-factory cost to be ₹5 lakh 4W: ₹1.5 lakh per vehicle max, max vehicle ex-factory cost to be ₹15 lakh</p> <p>West Bengal 2W: ₹20,000 per vehicle max, max vehicle ex-factory cost to be ₹1.5 lakh 3W: ₹50,000 per vehicle max, max vehicle ex-factory cost to be ₹5 lakh 4W: ₹1.5 lakh per vehicle max, max vehicle ex-factory cost to be ₹15 lakh</p> <p>Meghalaya 2W: Max vehicle ex-factory cost to be 1.5 lakh</p>	<p>Chandigarh 2W: Max subsidy: ₹30,000 per vehicle 3W: Max subsidy: ₹30,000 per vehicle 4W: 2W: Max subsidy: ₹1.5 lakh per vehicle</p> <p>Jharkhand 2W: Max subsidy: ₹30,000 per vehicle 3W: Max subsidy: ₹30,000 per vehicle 4W: 2W: Max subsidy: ₹1.5 lakh per vehicle</p> <p>Maharashtra 2W: Max subsidy: ₹30,000 per vehicle 3W: Max subsidy: ₹30,000 per vehicle 4W: 2W: Max subsidy: ₹1.5 lakh per vehicle</p> <p>Delhi 2W: Max subsidy: ₹30,000 per vehicle 3W: Max subsidy: ₹30,000 per vehicle</p>	<p>Meghalaya 3W: Max vehicle ex-factory cost to be ₹5 lakh 4W: Max vehicle ex-factory cost to be ₹15 lakh</p>	<p>Punjab 2W: ₹10,000 max subsidy per vehicle 3W: ₹30,000 max subsidy per vehicle 3W(N1): ₹50,000 max subsidy</p>	<p>Ladakh 2W: @10% of ex-factory cost upto ₹15,000 per vehicle Maximum ex-factory price to avail incentive to be ₹ 1.5 lakh 3W (e-ric/cart): @10% of ex-factory cost upto ₹30,000 per vehicle Maximum ex-factory price to avail incentive to be ₹ 3 lakh 3W (e-ric/cart): @10% of ex-factory cost upto ₹50,000 per vehicle Maximum ex-factory price to avail incentive to be ₹5 lakh 4W: @10% of ex-factory cost upto ₹2.5 lakh per vehicle Maximum ex-factory price to avail incentive to be ₹ 25 lakh</p> <p>Chhattisgarh For all segments, a subsidy of 10% cost of vehicle or max ₹1.5 lakh whichever is lower</p> <p>Odisha 2W: A subsidy of 15% or max ₹5,000 can be availed 3W: A subsidy of 15% or max ₹12,000 can be availed 4W: A subsidy of 15% or max ₹1,00,000 can be availed</p> <p>Uttar Pradesh 2W: @15% of ex-factory cost upto ₹5000 per vehicle 3W: @15% of ex-factory cost upto ₹12000 per vehicle 4W: @15% of ex-factory cost upto ₹1 lakh per vehicle</p> <p>Uttarakhand 2W: Upfront Subsidy of amount ₹5,000 4W: Subsidy of amount ₹50,000</p>

Note: The above table showcases subsidy slabs from highest to lowest subsidies offered by various states

Parameter 04 ROAD TAX AND REGISTRATION COST EXEMPTION



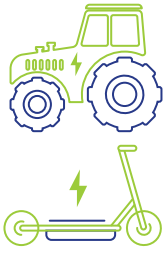
- ⚡ Twenty states provide 100% exemption from road tax and registration fees for electric vehicle during the policy period are: **Andhra Pradesh, Assam, Bihar, Chhattisgarh, Karnataka, Maharashtra, Meghalaya, Odisha, Punjab, Rajasthan, Telangana, Uttarakhand, West Bengal, Chandigarh, Ladakh, Andaman & Nicobar, Himachal Pradesh and Delhi.**
- ⚡ **Tamil Nadu:** 100% exemption from road tax and registration fees for electric vehicle till December 2022
- ⚡ **Gujarat:** 50% exemption from road tax and registration fees for electric vehicles
- ⚡ **Haryana:** 100% exemption from road tax | 75% exemption on road tax for 4Ws
Registration: ₹200 for 2 and 3Ws and ₹500 for 4Ws
- ⚡ **Jharkhand:** 100% exemption for first 10,000 buyers | 75% exemption for 10,001-15000 buyers | 25 % exemption after 15000 buyers upto policy period for both registration and road tax exemption
- ⚡ **Kerala:** 50% exemption on road tax for electric vehicles for the first five years
- ⚡ **Madhya Pradesh:** Road tax: 1% for all EVs during the policy period
Registration fee: 100% exemption during the policy period
- ⚡ **Uttar Pradesh:** 100% on any EV purchased & registered in UP over a period of 3 years from policy notification
- ⚡ **Manipur:** 100% exemption on vehicle registration fee
MV/Road tax: 2W: 30% exemption | 3W: 30% exemption | 4W: 20% exemption

Parameter 05 SUBSIDY FOR E-BUSES IN ADDITION TO FAME II



- ⚡ **Bihar:** ₹10,000 per kWh of battery capacity subject to a maximum of ₹25 lakh per vehicle
- ⚡ **Chhattisgarh:** 100% SGST will be reimbursed along with registration fee exemption
- ⚡ **Haryana:** Incentive of 10% of the ex- showroom price of vehicle up to ₹10 lakh
- ⚡ **Jharkhand:** Incentive of 10% of the ex- showroom price of vehicle up to ₹20 lakh
- ⚡ **Maharashtra:** Incentive of 10% of the ex- showroom price of vehicle up to ₹20 lakh
- ⚡ **Meghalaya:** Purchase subsidy ₹4000/- per kWh with maximum ex-factory price to be at ₹2 crore for EV buses
- ⚡ **Odisha:** Incentive of 10% of the ex- showroom price of vehicle up to ₹20 lakh
- ⚡ **Rajasthan:** As per battery capacity incentive will be decided by state between ₹1 lakh to 5 lakh
- ⚡ **Uttar Pradesh:** 15% of ex-factory cost upto ₹20 lakh per vehicle
- ⚡ **West Bengal:** Purchase subsidy ₹20,000/- per kWh with maximum upto ₹50 lakh, ex-factory price to be at ₹2 crore for EV buses
- ⚡ **Ladakh:** 5% of the Ex-Showroom Price of ₹50 lakh, ex-factory price to be at ₹2 crore for EV bus
- ⚡ **Andaman & Nicobar:** Purchase incentive of 10% of the cost of e-bus, upto a maximum of ₹8 lakh e-bus

Parameter 06 SUBSIDY FOR OTHER SEGMENTS SUCH AS TRACTORS, E-CYCLES, STRONG HYBRIDS



- 🔌 **Bihar:** 4W Hybrid: Purchase subsidy ₹10,000 per kWh with max incentive around ₹13,000
- 🔌 **Haryana:** Hybrid(SHEV/PHEV): 15% of the ex-showroom price of vehicle maximum up to ₹5 lakh
Electric tractor: 50% of the ex-showroom price of vehicle up to ₹5 lakh
Hybrid tractor: 50% of the ex-showroom price of vehicle up to ₹5 lakh
Hydrogen powered vehicle: 15% of the ex-showroom price of vehicle maximum up to ₹10 lakh
- 🔌 **Meghalaya:** Strong hybrid 4W: Subsidy ₹4000 per kWh for maximum ex-factory price to avail incentive is ₹15 lakh
- 🔌 **Punjab:** Ecycle: 25% of max sales price or ₹5,000 per cycle (whichever is lower)
Cycle cargo: 25% of max sales price or ₹15,000 per cycle (whichever is lower)
- 🔌 **Chandigarh:** Upfront: 25% of Cost of Bicycle or max ₹3,000
- 🔌 **Delhi:** Upfront subsidy of around ₹5,500
- 🔌 **Andaman & Nicobar:** For 4W strong hybrid/fuel cell: Purchase incentive ₹10,000 kWh, up to a maximum of ₹1,00,000

Parameter 07 FINANCING SUPPORT THROUGH INTEREST SUBVENTION (SUBSIDY OFFERED ON INTEREST RATES)



- 🔌 **Bihar:** Interest subvention of 10% to buyer of light electric freight vehicle or e-bus; For pedal rickshaw fleet owner interest subvention of 10% on loan taken for conversion/upgradation to 100% electric mobility
- 🔌 **Delhi:** The interest subvention of 5% being offered in the vehicle categories of E-Autos, E-rickshaws, E-carts and Goods carriers would be applicable, only if the loan is availed from the Delhi Finance Corporation (DFC)

Parameter 08 SCRAPPAGE INCENTIVE



- 🔌 **Chhattisgarh:** Additional monetary support will be provided via separate transport fund for the bus operators which look forward to scrap their vehicles
- 🔌 **Maharashtra:** 2W: ₹7,000 | 3W: ₹15,000 | 4W: ₹25,000
- 🔌 **Odisha:** As per GOI MoRTH guidelines
- 🔌 **Chandigarh:** 2W: ₹5,000 | 3W: ₹15,000 | 4W: ₹7,000
- 🔌 **Delhi:** 2W: ₹5,000 | 3W: ₹7,500
- 🔌 **Andaman & Nicobar:** 2W: ₹5,000 | 3W: ₹10,000 | 4W: ₹25,000 | L5N & N1: ₹20,000 | Bus: ₹50,000

Parameter 09 RETROFITTING INVENTIVE



- 🔌 **Assam:** @ 15% or up to max ₹15,000
- 🔌 **Rajasthan:** 15% of the retrofit kit cost (including taxes) up to ₹10,000 per vehicle
- 🔌 **Telangana:** 3W: A subsidy of ₹10,000 allocated for retrofitting
- 🔌 **Chandigarh:** 3W: A subsidy of 15% on total kit cost or max ₹10,000

Parameter 10 ELECTRICITY TARIFF BENEFITS TO CONSUMERS



- 🌀 **Assam:** 100% duty exemption on tariff
- 🌀 **Bihar:** ₹7.15 per unit
- 🌀 **Jharkhand:** ₹6 to ₹6.25 per unit
- 🌀 **Karnataka:** 100% duty exemption on tariff
- 🌀 **Kerala:** Charging between 10 pm and 6 am will cost ₹10 a unit, while it will be ₹12 between 6 am and 6 pm. During the peak 6 pm to 10 pm, the rate per unit will be ₹15.
- 🌀 **Madhya Pradesh:** The tariff for commercial EV charging stations and battery swapping stations has been fixed at ₹6 per unit.
- 🌀 **Maharashtra:** The tariff is applicable for all EV charging stations and battery swapping stations in the state has been fixed at between ₹4 and ₹6.6 per unit.
- 🌀 **Odisha:** ₹5.70 per unit
- 🌀 **Punjab:** ₹6 per unit
- 🌀 **Rajasthan:** ₹6 per unit
- 🌀 **Tamil Nadu:** The stations will charge the lowest of ₹8 per unit to ₹10 per unit as per time slots.
- 🌀 **Telangana:** Telangana State Electricity Regulatory Commission has fixed the tariff for charging stations at ₹6 per unit by creating a new category of consumer.
- 🌀 **Uttarakhand:** 100% duty exemption tariff
- 🌀 **Uttar Pradesh:** ₹5.90 per unit & ₹6.20 per unit
- 🌀 **West Bengal:** ₹6 per unit
- 🌀 **Chandigarh:** 3.60 kWh as per JERC
- 🌀 **Delhi:** People who charge their vehicle at home, (low-tension e-vehicle users) will pay ₹4.5 per kw instead of ₹5.5/kw; people who charge their electric vehicle at public charging stations (high-tension users) will pay ₹4 instead of ₹5.
- 🌀 **Andaman & Nicobar:** ₹6.9 per unit
- 🌀 **Himachal Pradesh:** Tariff defined under HPSEBL ₹5 per unit

Parameter 11 MANUFACTURING INCENTIVES



States with special incentives for electric vehicle industry, above their industrial policy

- 🌀 **Haryana:** Capital subsidy of Fixed Capital Investment (FCI) in the following amounts:
 - 25% of fixed capital investment up to a maximum of ₹15 lakh for micro industries.
 - 20% of fixed capital investment up to a maximum of ₹40 lakh for small and 50 lakh for medium industries.
 - 10% of fixed capital investment up to a maximum of ₹10 crore for first two units, under large industries, in each segment of electric vehicles (EV) (2 wheelers, 3 wheelers, 4 wheelers, buses), battery and charging equipment, hydrogen storage & fueling equipment manufacturing.
 - Additionally, special incentives will be given according to their need for mega, mega integrated automobile projects and ultra-mega batteries as well as to lithium battery manufacturing plants on a case-to-case basis.
 - 25% subsidy, for micro, small, medium enterprise, and large projects, for sustainable green measures on total fixed capital investment of the project (excluding the cost of land, land development, preliminary and pre-operative expenses, and consultancy fees) with a ceiling of ₹50 crore.

🌿 **Uttar Pradesh:** The capital subsidy defined under the Invest UP:

- 1st two Ultra mega battery project, a subsidy of 30% eligible fixed capital investment subject to max ₹1000 crore.
- 1st five mega EV projects & Battery projects will have a subsidy of 20% eligible fixed capital investment subject to max ₹500 crore.
- Large EV & Battery Project will have a 18% of eligible fixed capital investment subject to max ₹90 crore.
- MSME at 10% eligible fixed capital investment subject to max ₹5 crore.

🌿 **Tamil Nadu:**

- Reimbursement of 100% SGST paid on the sale of EVs manufactured, sold & registered for use in the State till 31 December 2030
- Capital Subsidy of 15% (where SGST reimbursement is NA) investments made before 2025 – till 10 yrs of validity & A capital subsidy of 20% for EV battery manufacturing plant.
- 100% exemption of electricity tariff tax till 31 December 2030
- Employment incentives
- Additional capital subsidy of 20% over the existing MSME units (If setup until 2025)
- Creation of EV Vendor parks & free trade warehousing zones
- Subsidy on Cost of Land
- Special Package for rEV Battery Manufacturing The Government will provide higher capital subsidy of 20% of the eligible investment over 20 years in cases where manufacturing units are engaged in EV battery manufacturing. Such units shall also be provided land at 20% subsidy and at 50% subsidy in Southern districts.

🌿 **Andhra Pradesh:** Capital subsidy on the following:

- 25% of Fixed Capital Investment (FCI) up to a maximum of ₹15 lakh for Micro industries.
- 20% of Fixed Capital Investment up to a maximum of ₹40 lakh for Small and ₹50 lakh for Medium Industries.
- 10% of Fixed Capital Investment up to a maximum of ₹10 crore for first two units, under Large industries, in each segment of Electric Vehicle (2 wheelers, 3 wheelers, 4 wheelers, buses), battery and charging equipment, hydrogen storage, and fueling equipment manufacturing.
- 10% of Fixed Capital Investment up to a maximum of ₹20 crore for first two units, under Mega category, in each segment of Electric Vehicle (2 wheeler, 3 wheeler, 4 wheeler, buses), battery and charging equipment, hydrogen storage, and fueling equipment manufacturing.
- For specific clean production measures, as certified by Andhra Pradesh Pollution Control Board (APPCB), 35% subsidy on cost of plant & machinery for Micro, Small & Medium Enterprises (MSME) up to a maximum of ₹35 lakh and 10% subsidy on cost of plant & machinery for Large projects up to a maximum of ₹35 lakh.
- 25% subsidy, for Micro Small and Medium Enterprises (MSMEs) and Large projects, for sustainable green measures on total Fixed Capital Investment of the project (excluding the cost of land, land development, preliminary and pre-operative expenses, and consultancy fees) with a ceiling of ₹50 crore.
- Special incentives will be given according to their need for Mega, Mega Integrated Automobile Projects, and Ultra-Mega Battery Manufacturing Plants on a case-to-case basis.
- Tax Incentives” 100% net SGST accrued to the State will be reimbursed for a period of 5 years for micro and small, 7 years for medium, 10 years for large industries. This reimbursement will be limited to 100% of CAPEX or for the period Stated, whichever is earlier.

🌿 **Jharkhand:** As per JIADA: JHARKHAND INDUSTRIAL AREA DEVELOPMENT AUTHORITY

- Comprehensive Project Investment Subsidy (CPIS): Subsidy under CPIS for MSME shall be admissible at the rate of 30% of investments made in fixed capital investment.
- Non MSME: Amount of investment for subsidy for non MSME units under CPIS will be calculated giving weightage of 50% to investment made in Plant and Machinery, 20% each

to investment in pollution control equipment and environment friendly alternative power generation equipment and 10% to investment in employee welfare

- A grant of 15% of the total grant released by the Government of India shall be offered by State Government to Cluster schemes
 - 100% Electricity duty of New or existing EV industrial units setting up captive power plant shall be reimbursed after payment of electricity duty for a period of five years for self – consumption or captive use
 - Interest rate subsidy at 6% per annum on total loan availed from public financial institutions/ Banks for period of five years from the date of Commercial Production subject to total maximum limit of
 - ₹15 lakh for Micro Enterprises
 - ₹50 lakh for Small Enterprises
 - ₹1 crore for Medium Enterprises
 - ₹3 crore for non-MSME Sector units
- For the Units that come up within a period of two years from the Date of Notification of this policy, Addition
- 50% rebate on prevailing land lease premium on the land allotted by the State Government agencies and land will be provided to units as upfront or in 10 equal installment in five years will be applicable only for those units to whom the land is allotted within a period of two years from the Date of Notification of this policy
 - 100% reimbursement of stamp duty and registration fee for land directly purchased
 - Financial assistance of 50% of the expenditure incurred, up to a maximum of ₹10 lakh, per patent registration

Karnataka: EV and Components Manufacturing Enterprises:

Micro, Small & Medium Enterprises A. Investment Promotion Subsidy

- Micro Enterprises 25% of the Value of Fixed Assets (VFA) (max. ₹15 lakh)
- Small Enterprises 20% of the Value of Fixed Assets (VFA) (max. ₹40 lakh)
- Medium Manufacturing Enterprises ₹50 lakh
- Exemption from Stamp Duty
- Concessional Registration Charges
- Reimbursement of Land Conversion Fee
- Exemption from Tax on Electricity Tariff

Incentives and Concessions to Large, Mega, Ultra Mega, and Super Mega Enterprises

- Exemption from Stamp Duty
- Concessional Registration Charges
- Reimbursement of Land Conversion Fee

EV Battery Manufacturing/Assembly Enterprises

- Micro, Small & Medium Enterprises a) Micro Enterprises 25% of the Value of Fixed Assets (VFA) (max. ₹15 lakh)
- Small Enterprises 20% of the Value of Fixed Assets (VFA) (max. ₹40 lakh)
- Medium Manufacturing Enterprises ₹50 lakh
- Investment Subsidy of 20% of the Value of Fixed Assets (VFA) (max. ₹20 crore per project)
- Concessional Registration Charges for all EV Cell Manufacturing, EV Battery Pack/Module Manufacturing & Assembly Enterprises
- Reimbursement of Land Conversion Fee for all EV Cell Manufacturing, EV Battery Pack/Module Manufacturing & Assembly Enterprises
- Exemption from Electricity duty for EV Cell Manufacturing MSMEs, EV Battery Pack/Module Manufacturing & Assembly MSMEs.

Telangana: EV & ESS policy

- Capital Investment Subsidy: 20% of investment capped at ₹30 crore for Mega Enterprises



- SGST Reimbursement: 100% net SGST reimbursement capped at ₹5 crore per year with a cumulative cap of ₹25 crore over a period of 7 years for Mega Enterprises.
- Power Tariff Discount: 25% for 5 years capped at 5 crore for Mega Enterprises.
- Electricity Duty Exemption: 100% for 5 years capped at ₹0.5 crore.
- Interest Subvention: 5.25% for 5 years capped at ₹5 crore.
- Transportation Subsidy: 60% with 10% reduction YoY – for 5 years; capped at ₹5 crore.
- Stamp Duty/ Transfer Duty/ Registration Fees Reimbursements: 100% on first, 50% on second transaction.
- Lease Rental Assistance, Assistance in Patent Filing, Reimbursement of Quality Certification costs, Cleaner Production cost reimbursement, Exhibition Cost Reimbursements, Skill Development Assistance.

🌀 **Punjab:**

- Benefits under the Punjab Industrial and Business Development Policy 2017 will be extended to the EV manufacturing units: additionally
- Concessional land
- Infrastructure development support
- Stamp/registration duty fee reimbursement
- GST reimbursement
- Employment subsidy
- Special concessions for EV units wrt to Giga factory battery manufacturing units & Tractor manufacturing units will be extended case to case basis.

🌀 **Rajasthan:** Benefits under the Rajasthan Investment Promotion Scheme, 2019 (RIPS 2019) will be extended to the EV manufacturers

- Investment Subsidy of 75% of State tax due and deposited, for seven years
- Employment Generation Subsidy in the form of reimbursement of 50% of employer's contribution towards employees EPF and ESI, for seven years
- Exemption from payment of 100% of Electricity Duty for seven years
- Exemption from payment of 100% of Land Tax for seven years
- Exemption from payment of 100% of Market Fee (Mandi Fee) for seven years
- Exemption from payment of 100% of Stamp Duty 8. Exemption from payment of 100% of conversion charges payable for change of land use and conversion of land

🌀 **Assam:** In addition to the 30% Capital Investment Subsidy available under NEIDS, 2017 or any subsequent policy from Govt. of India/State Govt., units manufacturing EV or their components will be eligible for the following additional incentives:

- 20% of the cost of Plant & Machinery up to Rs. 15 lakh for Micro Units
- 20% of the cost of Plant & Machinery up to Rs. 50 lakh for Small Units
- 20% of the cost of Plant & Machinery up to Rs. 1 crore for Medium Units
- 10% of the cost of Plant & Machinery up to Rs. 10 crore for Large Units
- In addition to the 3% Interest Subsidy on Working Capital Loan available under NEIDS, 2017 or any subsequent policy from Govt. of India/State Govt., units manufacturing EV or their components will be eligible for additional Interest Subsidy @ 2% on Working Capital Loan

🌀 **Gujarat:** All provisions of the Gujarat Industrial Policy-2020 are extended to EV Manufacturing units in the state. As per MSME,

- @25% of eligible Term Loan Amount subject to a maximum amount of ₹35 lakh; if the Eligible FCI is over ₹10 crore, additional ₹10 lakh will be given
- @20% of eligible Term Loan Amount subject to a maximum amount of ₹30 lakh; if the Eligible FCI is over ₹10 crore, additional ₹7.5 lakh will be given
- @10 % of eligible Term Loan Amount subject to a maximum amount of ₹10 lakh; if the Eligible FCI is over ₹10 crore, additional ₹5 lakh will be given

States offering the same incentives as per their industrial policy

- 🌀 **Maharashtra:** The benefits under MIDC policy will be extended to the EV manufacturing units
- 🌀 **Odisha:** The benefits under the IPR/ Industrial Policy resolution 2015 will be extended to the EV manufacturing units.
- 🌀 **Bihar:** As per BIEAP: All incentives as mentioned in Chapter 6 of Bihar Industrial Investment Promotion Policy, 2016
- 🌀 **Meghalaya:** All the benefits under MIIP will be extended to the EV manufacturing units.
- 🌀 **West Bengal:** State Capital Investment Subsidy under the industrial policy benefits to be extended.
- 🌀 **Madhya Pradesh:** Under MPIDPP all the benefits will be extended to the EV manufacturing units
 - Large Scale Industrial Unit with investment in Plant and machinery more than ₹10 Crore will be eligible.(P&M means Investment in building and machinery)
 - Green industrialization subsidy – 50% up to a maximum limit of ₹1 crore capital subsidy for investment made in setting up of ETP/STP.
 - Private industrial Park with minimum area 10 acres can get the assistance of 15% of the expenditure made on development of industrial park subject to maximum limit of ₹5 crore.
 - Infrastructure development subsidy – 50% assistance subject to maximum of ₹1 crore, for each, shall be provided for developing power, road and water infrastructure.
- 🌀 **Kerala:** Under the EDSM policy all the benefits will be extended to EV manufacturing units
 - Government shall provide 20% capital subsidy for new manufacturing units in ESDM sector in the State.
 - 10% investment subsidy (maximum ₹10 crore) on fixed capital for non-MSMEs
 - 100% State GST reimbursement for capital investment for five years for non-MSMEs
 - 100% electricity duty exemption for MSMEs for five years
 - 50% reimbursement (maximum of ₹1 crore) of new MSMEs' expenses
 - 100% waiver of stamp duty and registration charges for setting up manufacturing units in industrial parks
 - 20% reimbursement (maximum ₹25 lakh per unit) on cost of software including big data analytic tools and machinery in upgrading manufacturing
- 🌀 **Uttarakhand:** The MSME Policy 2015 (as amended in 2018) its benefits will be extended to the EV manufacturing units.
- 🌀 **Himachal Pradesh:** The provision of the H.P. State Industrial Policy, 2019 benefits to be extended.
- 🌀 **Chhattisgarh:** All the incentives under the MSMED Act, 2006 will be extended to the manufactures as applicable/ eligible under industrial Policy, Govt. of Chhattisgarh 2019-24
 - Additionally: State to offer a grant of 25 % of the cost of plant and machinery to boost EV manufacturing enterprise.
 - The state allotted 500-1000 acres of land to develop an EV park to attract manufacturers.

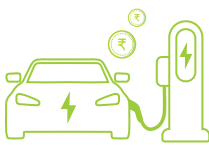
Parameter 12 RESEARCH AND DEVELOPMENT FUND



- 🌀 **Andhra Pradesh:** ₹500 crore under COE for R&D
- 🌀 **Bihar:** State will offer R&D fund under SIPB
- 🌀 **Haryana:** State to support research institutions for R&D with support upto 50% or ₹1 crore for charging tech and ₹5 crore for vehicle technology.

- 🌀 **Karnataka :** Under Karnataka electric mobility research and innovation centre setup under state fund for working on technologies like battery, charging, vehicles etc.
- 🌀 **Madhya Pradesh:** Under MPIDPP R&D grants will be issued
- 🌀 **Punjab:** Punjab e-mobility COE collaboration with PEDA, Under the R&D it will focus on battery technology, vehicle level etc.
- 🌀 **Tamil Nadu:** Under COE in partnership with institutes grants will be provided by the state for focussed research on battery technologies, battery management, EV motors and controllers.
- 🌀 **Uttar Pradesh:** Under Industrial policy setting of COE for R&D on battery, motor technology.
- 🌀 **West Bengal:** Allocation of separate one time R&D grants to support the EV Companies based on the project.

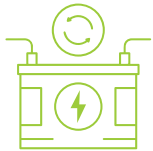
Parameter 13 CHARGING INFRASTRUCTURE INCENTIVE



- 🌀 **Andhra Pradesh:** Capital Subsidy of 25% of the value of the charging station equipment/ machinery or a maximum subsidy of ₹10,00,000 for 100 V & above for 100 stations
Capital Subsidy of 25% of the value of the charging station equipment/machinery or a maximum subsidy of ₹30,000 for 100V & below
- 🌀 **Arunachal Pradesh:** Capital subsidy of 15% of total cost of machinery/station for Oil marketing companies & 25% total cost of station for CPO-Charge Point Operator to be incentivised
- 🌀 **Assam:** Capital Subsidy of 25% of the value of the charging station equipment/machinery upto a maximum subsidy of ₹10,00,000
- 🌀 **Bihar:** Capital Subsidy of 25% of the value of the charging station equipment/machinery upto a maximum subsidy of ₹5,00,000
- 🌀 **Chhattisgarh:** Capital subsidy of 25% on cost of the equipment & als government will also provide 100% SGST reimbursement
- 🌀 **Gujarat:** Capital Subsidy of 25% of the value of the charging station equipment /machinery upto a maximum subsidy of ₹10,00,000
- 🌀 **Haryana:** Capital Subsidy of 25% of the value of the charging station equipment / machinery or a maximum subsidy of ₹10,00,000 for stations above 100V and Capital Subsidy of 25% or ₹30000 max for station for below 100V
- 🌀 **Jharkhand:** Slow: 60% or ₹10,000 max of the total cost | Moderate/Fast: 50% or ₹5 Lakh max of the total cost | Solar based: 70% or ₹7 lakh max of the total cost
- 🌀 **Kerala:** Capital Subsidy of 25% of the value of the charging station equipment/ machinery or a maximum subsidy of ₹10,00,000 for stations above 100V and Capital Subsidy of 25% or ₹30000 max for station for below 100V
- 🌀 **Maharashtra:** Slow: 60% of the cost or ₹10,000 max | Moderate/fast: 50% of the cost or ₹5,00,000 max
- 🌀 **Odisha:** A subsidy of ₹5000 per charger
- 🌀 **Punjab:** 3000 per Charge Point for level 1 charger and ₹10000 per Charge Point for Level 2 charger
- 🌀 **Rajasthan:** SGST Reimbursement for defined station units
- 🌀 **Tamil Nadu:** TANGEDCO will invest in setting up both slow and fast charging Networks
- 🌀 **Uttar Pradesh:** A capital subsidy of 20% of total cost or subject to maximum ₹10 lakh per unit station
- 🌀 **Chandigarh:** Private Charging: Infrastructure incentive of ₹6,000 max for 30,000 Pvt chargers
Public Charging Station (high capacity): GST reimbursement or max ₹50,000

- 🌀 **Ladakh:** Capital subsidy of 25% or max ₹5 lakh per charging station which so ever is lower
- 🌀 **Delhi:** Government of National Capital Territory of Delhi will provide a 100% grant for the purchase of charging equipment up to ₹6000 per charging point.
- 🌀 **Andaman & Nicobar:** Slow: Capital Subsidy of 60% of the value of the charging station equipment/machinery or a maximum subsidy of ₹10,000 per station | Fast: Capital Subsidy of 50% or ₹5,00,000 max per station

Parameter 14 FOCUS ON BATTERY RECYCLING



- 🌀 States actively promoting & attracting investments for battery recycling include **Andhra Pradesh, Assam, Chhattisgarh, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh** and **Andaman & Nicobar**.
- 🌀 **Chandigarh** and **Manipur** promote the reuse of EV batteries along with recycling.
- 🌀 **Delhi** aims to set up battery collection centres and collaborate with manufacturers for recycling.

Parameter 15 EMPLOYMENT GENERATION INCENTIVES



- 🌀 **Andhra Pradesh:** Stipend of Rs 10,000 per employee per year to a maximum of first 50 employees for a single company for Micro, Small, Medium and Large firms.
- 🌀 **Haryana:**
 - Employment generation subsidy shall be extended to manufacturing units established only in B, C and D category blocks (under the defined policy), for capacity building of persons belonging to Haryana (skilled/semi-skilled/unskilled) [having Haryana Resident Certificate].
 - Subsidy of ₹48,000 per employee per annum for 10 years for direct employment on payroll or contract with valid ESI/PF
- 🌀 **Jharkhand:** Incentives to be provided under the Industrial policy skill development incentives.
- 🌀 **Punjab:** Employment generation subsidy of ₹36,000 per male employee per year for a period of 5 years and ₹48,000 per female and SC/ST/OBC employee per year for a maximum period of 5 years.
- 🌀 **Tamil Nadu:** Incentive shall be paid for a period of one year and up to ₹48,000 per employee.
- 🌀 **Uttar Pradesh:** Incentive as reimbursement of stipend shall be provided one time at ₹5,000 per employee per year to a maximum of the first 50 employees to all defined manufacturing projects.
- 🌀 **Uttarakhand:** 50% reimbursement for 10 years with a ceiling of ₹2 crore for units employing 1,000 or more skilled/semi-skilled labour full-time.

Parameter 16 PROMOTION AND CREATION OF GREEN ZONES



- 🌀 **Andhra Pradesh, Madhya Pradesh, Maharashtra, Punjab, Uttar Pradesh, West Bengal** and **Himachal Pradesh**.

Parameter 17 FOCUS ON SKILL DEVELOPMENT



- Andhra Pradesh:**

 - State will identify the required quantum of skilled manpower, map EV-specific skill sets and provide courses at different levels of education – matriculation and above.
 - State will work with Local Industrial Training Institutes (ITIs), employment exchange centres, and technical institutes will be prepared to introduce EV courses & train technicians and engineers.
- Chhattisgarh:** State to set up Skill Centers with provision for training related to jobs in the EV ecosystem.
- Gujarat:** State aims to work with Gujarat Energy Research & Management Institute (GERMI) which will be the nodal agency to support training.
- Haryana:** Training for various skill developments for various stakeholders in the EV ecosystem by the state and Industrial Training Institutes.
- Kerala:** State to support in re-skilling and training.
- Madhya Pradesh:**

 - State will identify the required quantum of skilled manpower, map EV-specific skill sets and provide courses at different levels of education – matriculation and above.
 - Polytechnics, Local Industrial Training Institutes (ITIs), employment exchange centres, and technical institutes will be prepared to introduce EV courses & train technicians and engineers.
- Maharashtra:** In partnership with relevant/interested OEMs and service providers, the state shall develop skill enhancement centres for creating vocational courses on the EV ecosystem.
- Meghalaya:** Aims to create a skilled workforce in collaboration with Institutions in the state
- Odisha:** Aims to set up Skill Centers with provision for training related to jobs in EV ecosystem.
- Punjab:** Facilitate skill development via partnering with relevant stakeholders.
- Rajasthan:** Skill development to be carried out in partnership with RSLDC along with companies.
- Tamil Nadu:** Tamil Nadu Skill Development Corporation (TNSDC) to provide short-term skilling to the existing manpower.
- Uttarakhand:** Organisations imparting skill development training in EV/HEV components manufacturing will be entitled to training reimbursement of ₹1,000 per month for 50 trainees.
- West Bengal:** The state to support via Vocational/ITI Courses to be implemented and also setting up intelligent mobility skill centres.
- Chandigarh:** Short-term courses on electric mobility, EVSE, repair and maintenance, and battery manufacturing and maintenance shall be developed and introduced by Education Department in collaboration with the Transport department, Chandigarh.
- Delhi:** Setting up of Skill Centers with provision for training related to jobs in the EV eco-system and creation of jobs.
- Andaman & Nicobar:** State to provide suitable training via various programs.
- Manipur:** Create a skilled workforce for the EV industry in collaboration with technical institutions.

Parameter 18 STATE EV CELL OR STEERING COMMITTEE RESPONSIBLE FOR IMPLEMENTATION



- 🌀 **Chhattisgarh:** The nodal agency will be leading and responsible for setting up the committee and monitor the growth.
- 🌀 **Gujarat:** Transport department will be the nodal agency (committee to to monitor the growth)
- 🌀 **Jharkhand:** Under the Industrial department steering committee
- 🌀 **Karnataka:** Under the BESCOM Karnataka electric vehicle cell will be responsible for monitoring the EV growth
- 🌀 **Madhya Pradesh:** Madhya Pradesh Urban Development & Housing Department (UDHD), Government of Madhya Pradesh ('GoMP'), will be the nodal department for the implementation of Madhya Pradesh Electric Vehicle (EV) Policy
- 🌀 **Maharashtra:** Respective cities under state have formed their EV Cell under the GoM
- 🌀 **Meghalaya:** Transport depart will lead the committee and support the growth of EVs in the state
- 🌀 **Odisha:** Transport department will be the leading steering committee along with the other departments for implementation of EV policy
- 🌀 **Punjab:** The transport department will be the nodal committee under which the state EV is set up to support and monitor the growth.
- 🌀 **Rajasthan:** Under the transport department, a state EV cell has been setup which will monitor the growth of the EVs in the state.
- 🌀 **Tamil Nadu:** Invest tamil nadu will be the steering committee
- 🌀 **Telangana:** TSREDCO will be the nodal agency along with other departments.
- 🌀 **Uttar Pradesh:** Invest UP will lead the committee along with other depts to support the growth of EVs in the state
- 🌀 **West Bengal:** The transport department will be the nodal agency and with the others departments EV accelerator cell will be in place.
- 🌀 **Chandigarh:** CREST/Chandigarh Renewal Energy and Science & Technology Promotion Society will be leading the committee along with other departments.
- 🌀 **Ladakh:** Transport department will be leading the committee along with the state EV cell under them.
- 🌀 **Delhi:** State EV cell under transport department in place which monitors the growth of EVs in the states.

Parameter 19 TARGETS FOR FLEET ELECTRIFICATION



- 🌀 **Assam:** All govt vehicles to be electrified by 2030
- 🌀 **Haryana:**
 - Implementation of 100% EV for fleets and logistics companies
 - All govt vehicles to be electrified by 2024
- 🌀 **Karnataka:**
 - 100% EV deployment in goods category vehicles by 2030
 - Replace 50% of all government vehicles with electric vehicles
- 🌀 **Madhya Pradesh:**
 - Convert 100% of all commercial & logistics fleets to electric fleet by 2028

- Phase out all fossil fuel based commercial fleets and logistics vehicles in all cities by 2030
- All forms of Government vehicles, including vehicles under Government Corporations, Boards and Government Ambulances etc. will be converted to electric vehicles by 2028

 **Maharashtra:**

- 25% target for EV vehicles among e-commerce, delivery and logistics service providers in the state by 2025
- Starting April 2022, all new govt. vehicles (owned/leased) operating within the major cities to be electric

 **Delhi:**


- All leased/hired cars used for the commute of GNCTD officers shall be electric
- All delivery service providers shall be expected to convert 50% of their fleet operating in Delhi to electric by 31st march, 2023 and 100% by 31st March, 2025

 **Andaman & Nicobar:** Converting 50% of existing bus fleet to electric

 **Manipur:** Mandate EV adoption in the State Government fleet


Parameter 20 FOCUS ON JOB CREATION




 **Andhra Pradesh:** Create 60,000 job opportunities via various investments

 **Bihar:** Create 10,000 job opportunities via various investments

 **Karnataka:** Create 50,000 job opportunities via various investments


 **Tamil Nadu:** Create 1,50,000 job opportunities via various investments


 **Telangana:** Create 1,20,000 job opportunities via various investments


 **Himachal Pradesh:** Numbers not defined

Parameter 21 MANDATES FOR CHARGING INFRASTRUCTURE





 **Andhra Pradesh:** All new permits for commercial complexes, housing societies and residential townships with a built-up area 5,000 sq.mt and above will mandate charging stations.


 **Chhattisgarh:** Setting up charging stations and dedicated parking space for EVs in housing board/residential welfare societies, public parking and parking of shopping malls for the upcoming residential & commercial buildings may be mandated in building bye-law.

 **Maharashtra:** New residential buildings will be mandated to have at least 20% of the total parking spaces as EV ready of which 30% should be in common parking spaces or parking spaces unallotted to any individual residence owner.

 **Odisha:** Setting up of Charging Infrastructure shall be mandated in the Housing Policy by H&UD Department.

 **West Bengal:** Mandates in setting-up of EV charging stations including home charging, workplace charging and EV-ready parking.

 **Chandigarh:** 20% of all vehicle holding capacity/parking to be charging infra ready.

 **Ladakh:** Mandate creation of charging infrastructure at all newly constructed housing societies, office complexes, shopping arcades/malls, market areas, hotels & guesthouses.

 **Delhi:** 20 % of all vehicle holding capacity/parking required to be Electric Vehicle ready.

Note:

- Early bird subsidy is not being taken in consideration
- There are 28 states with EV subsidies – only 27 are considered & Goa is not considered due to discontinuation

RECOMMENDATIONS

The following recommendations are suggested to improve the design and implementation of existing state EV policies, which will help build the overall EV ecosystem in India and accelerate transport decarbonisation:

- 🔌 **Inclusive policy designs:** India has made a good start with the number of state EV policies launched over the last two years. However, the growth of e-mobility will depend on the depth and comprehensiveness of these policies to progress across all areas - penetration of EV vehicles, as well as growth of the overall EV ecosystem through charging infrastructure and manufacturing of vehicles and batteries. There is a need for several states to reassess the design of their EV policies, and include more provisions and incentives to enable e-mobility growth.
- 🔌 **Long term vision till 2030:** Many of the state EV policies are defined for two years or less, and few have a longer term vision of six years or more. Within policies, certain incentives are discontinued after a shorter period than the policy's end date. Given that India's e-mobility transition is in early stages, transport decarbonisation will need long term policy support till at least 2030, where incentives drive EV sales and growth in the overall EV ecosystem. States should consider extending all EV policies till 2030.
- 🔌 **Ambitious and holistic EV targets:** While most EV policies have some form of targets, they focus on either sales penetration, or charging infrastructure, or investments. Further, some focus on absolute numbers for EV sales, while others focus on percentage of future vehicle sales. Many have adopted the power ministry's charging infrastructure guidelines of one charging station per 3×3 kms, but not quantified their public/semi public charging station targets. There is a need for all states to define clear targets across EV penetration, preferably a percentage of future sales, as this takes into account overall vehicular growth in the future. Also, states should define a target for the electrification of public transport, particularly buses. To boost the overall EV ecosystem, all state policies should consider targets for the growth of charging infrastructure and investments in the sector.
- 🔌 **Mandates for charging facilities in urban infrastructure:** Charging infrastructure is a prerequisite for EV growth in the country, and despite the latter growing well, the density of public and semi public charging stations in India is fairly low. State EV policies can accelerate this growth by mandating all existing and future urban construction like malls, hospitals, parking lots, offices, residential complexes to install EV charging points. Ten states have already mandated this, and this is a low hanging fruit which would reap high benefits.
- 🔌 **Focus on fleet electrification:** According to a study, India's annual deliveries are 2.6 billion, and result in annual emissions of 500,000 tCO₂. In 2021, tier 2 and 3 cities witnessed more online transactions than ever before, showing that e-commerce is growing across India, and with it, comes the growth of last mile delivery services and vehicle fleets. By 2030, India's e-commerce market would deploy more than 2.6 million vehicles. Similarly, cab aggregators is a growing market in India, and as is the trend globally, India too will see a reduction in ownership of personal vehicles and increase in shared mobility. Therefore, keeping an eye on the future, state EV policies should focus on mandating the electrification of fleets.
- 🔌 **Monitoring for effective implementation:** States must create nodal agencies or bodies that monitor the implementation and impact of their policies, which will improve the effectiveness of implementation as well as provide opportunities to course correct and revise policies based on what's working well.
- 🔌 **Incentivise battery swapping solutions:** Battery swapping has a distinct role to play in the growth of e-2W and e-3W segments, particularly among commercial fleets. Fiscal and non-fiscal support for battery-swapping services can boost EV penetration in these target segments. So far, very few states offer fiscal incentives for battery swapping. Incentivizing battery swapping services will significantly grow the overall EV ecosystem.

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