Telangana Electric Vehicle Policy 2019

Draft

Government of Telangana
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1. Preamble

Global Automobile Industry is witnessing one of its most radical transformation since the Ford model T heralded the era of modern automobiles in 1908 as the Electric Vehicles (EV) get recognized as a promising alternative to ICE (Internal Combustion Engine) vehicles. Zero tailpipe emissions and innovation in battery technologies make EVs an economically viable and sustainable mobility solution that is fast finding global support from Policymakers and Industry leaders alike.

EV vehicle technologies is further breaking new grounds at regular intervals as discussed below, showing promise of a price/performance parity with ICE vehicles by 2025 and emergence as the dominant mobility solution for masses.

a) Battery cost dropping rapidly and may reach to half of its current level in less than 10 years.
b) Electric Vehicle performance is expected to improve by 2 times from its current levels in 10 years.
c) Charge time is decreasing from 5 hours to less than 1 hour thus reducing the range anxiety.
d) Energy cost per km for electric vehicles is 4-5 times less than gasoline equivalents.

However, considering that the initial ownership cost of Electric vehicles is currently on the higher side, various countries have rolled out policy and financial support to accelerate EV adoption, as given below.

**Norway**– Electric Vehicles enjoy exemption from non-recurring vehicle taxes, including road tax, toll, and parking fees. This scheme resulted in EVs reaching a record market share of 60% of all new cars in March 2019.

**China**– Electric Vehicles are exempt from acquisition and excise taxes and are allowed total or partial waivers from license plate availability restrictions and offer financial incentives, thus explaining strong sales volumes (336,000 cars) and 40% growth rate in 2016 compared to 2015.

**Japan**– A subsidy scheme introduced in 2016 grants progressively higher subsidies as the electric range of the model increases, with maximum subsidy equivalent to $7700. Electric Vehicle sales (typically with larger batteries and higher electric ranges) increased by almost 50% in 2016.

The policy support has helped accelerate the EVs demand. Over 5.6 Million electric vehicles are estimated to have been sold globally so far and sales trends showing huge growth (from 0.3 Million in 2014 to 2.1 Million in 2017).

The global trend is also reflecting on the Indian Auto Sector for a sustainable mobility solution in view of the rising vehicle population on the roads and resulting pollution. The government of India (GOI) in its Automotive Mission Plan 2016 laid a vision of ‘safe, comfortable and efficient mobility with an eye on environmental protection and affordability through both public and personal transport options’.

2. Concerns with ICE Vehicles in India

a) Nearly 84% of India’s crude requirement is imported, with the import bill at $111.9 Billion in 2018-19. The projected vehicle volumes in 2030 make crude import dependence and spending even worse.
b) ICE vehicles, particularly diesel based cause air quality degradation that perpetuates climate change.
c) Diesel exhaust contains pollutant causing major health risks such as heart diseases, lung cancer etc.

3. Electric Vehicles in India

Electric vehicles in India has received little public interest despite being available for a significant period (REVA Electric four-wheeler was launched in 2001), primarily due to the following issues.
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a) Inadequate public and private vehicle charging infrastructure.

b) High charging time and limited range with existing battery technologies leading to range anxiety.

c) Absence of an Electric Vehicle portfolio across segments comparable with available ICE Vehicles.

d) Maturity of current Battery technologies as well as the cost parity of EV's with ICE vehicles.

4. Need for EV Policy

India currently has roughly 20 cars per 1000 persons, compared to 800 cars per 1000 persons in the United States, creating the growth opportunity but also posing challenges in terms of energy security, and environmental/infrastructure balance. The Indian Auto market size is projected anywhere between 9.8 Million to 13.4 Million cars alone in the year 2026 (from 2.8 Million in 2015-16).

As per a study report, India can save as much as $60 billion in energy costs by 2030 and one Gigatonne of carbon emissions between 2017 and 2030 by adopting more electric and shared vehicles. GOI launched its FAME (Faster Adoption and Manufacturing of Electric Vehicles) scheme in 2015, outlining subsidies for EV adoption and bringing focus on four key areas of technology development, demand creation, pilot projects and charging infrastructure.

However, the pace of adoption despite the government push failed to meet expectations, primarily due to lack of adequate charging infrastructure along with high price and low performance of EVs. While the Pace of EV and battery technologies developments forecast a price/performance parity with ICE vehicles by 2025, availability of charging infrastructure remains a challenge and key to mass EV adoption.

This policy builds upon FAME II scheme being implemented from April 2019 by Department of Heavy Industries, Govt. of India, where it also suggested States to offer fiscal and non-fiscal incentives in order to further improve the use case for adoption of EV's. Govt. of India has also released eligibility criteria for availing subsidies.

Advantage Telangana

a) Telangana is recognized as a frontrunner among Indian states in Ease of Doing Business in GOI and World Bank rankings. As per a 2017 report by ASSOCHAM, Telangana surpassed its southern peer states in attracting investments. These results are built upon radical industrial reforms initiated since Telangana state formation, making Telangana a go-to destination for manufacturing sector.

b) A major highlight of this reform process is TSi-PASS, a path-breaking industrial project approval system that provides time-bound clearances (15 days for mega projects) based on self-certification. Investments worth 19.5 Billion USD and generating employment for 540000 people has been approved through TS-iPASS till date, highlighting Industries confidence in the system.

c) Telangana State policy support goes beyond Ease of Doing Business and industrial infrastructure in form of preferential allotment to Made in Telangana products for government orders.

d) Telangana has the desired social and urban infrastructure to translate into a strong demand and nurturing ground for EV technologies. Vehicle registrations in Telangana have for long registered double-digit growth, making it one of major Automotive Market in the country.

e) Telangana has attracted significant investments from new and existing Automotive units since its formation and is home to Mahindra and Mahindra and MRF manufacturing base along with Hyundai and ZF global R&D centres. Many more marquee names are at various stages of setting up their operations in the state. A host of Tier I and II suppliers are also present to support the OEMs.
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f) EV manufacturing has a large power electronics dependence, giving Telangana a strong supply chain advantage over other Automotive Hubs in India. Telangana holds the legacy of a strong Electric and Electronics manufacturing base led by PSUs like ECIL and BHEL.

g) Telangana has a strong knowledge sector presence with some of biggest global IT major and research establishment presence in the state. Good supply of knowledge workers from premier technical institutes such as IIT, IIIT and NIT Warangal have well supported these knowledge-based entities that can be further leveraged to support R&D initiatives for Electric Vehicles.

h) Telangana Industrial Infrastructure is unmatched with its vast Industrial land bank, 24*7 Power and water supply. Telangana holds a strong logistic advantage with its location on India’s Map and excellent highway network, offering access to major automotive markets and supply chain bases.

i) Telangana has abundant native labour supply for all shop floor activities in a manufacturing environment. Besides Telangana is also known for its harmonious Industrial Relations environment.

EV Ecosystem Highlights -2017-19

Demand Side

a) Hyderabad is one of the 6 lighthouse cities in India, identified by Niti Aayog for implementation of various demand side EV pilot projects.

b) Hyderabad is one out of nine cities for GOI’s Electric Bus Pilot Project under FAME scheme. The Buses are successfully deployed on select routes and is currently the single largest Electric Bus fleet in any Indian City, resulting in saving of 4380 Tonne CO2 emissions per year.

c) TSRTC plan for 60 more buses in 2019 and 500 buses by end of 2020, subject to FAME support

d) UBER and Zoomcar has initiated the deployment of Electric Vehicles in their Hyderabad fleet.

e) Some large IT companies such as WIPRO and Cognizant have already started the shift to EV in their employee commute fleet in Hyderabad.

f) Hyderabad Metro Rail Limited (HMRL) has concluded tenders for the deployment of 100 Electric Auto Rickshaws at all Metro stations.

g) Telangana State Electricity Regulatory Commission has created a special Power Tariff category for Electric Vehicle Charging Stations.

h) Hyderabad is host to a India’s largest Public DC fast charging public, operated by FORTUM.

i) Telangana State Renewable Energy Development Corporation (TSREDCO) has been nominated as the State Nodal Agency for “Setting up of Charging Infrastructure for Electric Vehicles” in the State of Telangana

Supply Side

a) India’s leading Electric Bus Manufacturer Olectra Greentech-BYD and Electric three wheeler manufacturer Gayam Motor Works has their manufacturing base in Telangana State

b) Proposals have been received from global battery manufacturers for setting up their manufacturing/assembly units in Telangana

c) Non-Ferrous Technologies Development Centre (NFTDC) Hyderabad is identified as one of the Centre of Excellence on EV motors and controllers under FAME scheme.
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5. Vision
To establish Telangana as the benchmark state in India and a showcase model of International standards for Electric Vehicle adoption, supported by a world-class infrastructure and supply ecosystem.

6. Mission
The EV policy is targeted towards a planned migration to Electric Vehicles including 100% in Public Transport and Shared mobility services by 2030, in Telangana state, supported by an enabling infrastructure and local supply base for Electric Vehicles and related components.

7. Objectives
a) To attract investments worth $ 3.0 Billion and create employment for 50000 persons by year 2022 through EVs in shared mobility, charging infrastructure development and EV manufacturing activities.

b) Provide best in class ecosystem and infrastructure to make Telangana the EV Hub of India.

c) Develop a proving ground for viable Business models through accelerated demand for EVs.

d) Make Telangana state the preferred destination for Electric Vehicle and component manufacturing.

e) Develop Telangana as a global centre for cutting-edge research and innovation in Electric vehicles and other emerging technologies such as Autonomous/Connected vehicles.

8. Strategies
a) Clear Definition of incentives on Supply and Demand Side of an Electric Vehicle ecosystem

b) Incentives/policy support for EVs to include Strong/Plug-in Hybrids for first 5 years, till 2022.

c) Support and clear roadmap for developing charging infrastructure in the state.

d) Incentives related to various components of ownership cost of Electric Vehicles.

e) Promote adoption of EVs at Institutional Level, starting with Government entities.

f) Establishing a start-up ecosystem to nurture innovation in EV technology space.

g) Support for Research and Innovation in Electric, Autonomous, and Connected mobility.

h) Emphasis on skill development for EV design, development, and manufacturing.

i) Promote manufacturing of Battery cells and packs through special status/ incentives.

9. Policy period
This policy is applicable for period of 5 years from the date of notification of policy. The policy will be reviewed annually by Apex Committee as notified in this policy.

10. Policy Measures
This policy builds upon the Telangana Industrial Policy framework 2014 that defined Auto Sector as one of the thrust sectors. Besides, considering the current shift in the Auto Sector towards Electric Vehicles, priority sector status is accorded here to EV and EV component Industry. Policy support will be extended on both demand and supply side of EV ecosystem, however only advance battery (charge density greater than or equal to Li-ion) based product solutions and concerned enterprises will be eligible for the same. Support for Hybrids will be governed as per the defined technical criteria’s for Strong/Plug-in hybrids and a cap on ex-factory price. Further alignment of the proposed EV policy is ensured with the recently release FAME II scheme by GOI.
10.1. Demand Side

The demand side policy support is targeted at accelerating EV adoption through shared mobility, supported by a strong charging infrastructure. Following vehicle categories will be covered in the Demand side policy support

- Electric Two-wheelers and Electric Assisted pedal bikes
- Electric Three wheelers
- Electric Four Wheelers
- Electric cargo vehicles (light, medium and heavy duty)
- Electric Vans and Buses (light, medium and heavy duty)

10.1.1. EV Promotion Fund

The state government will establish an EV promotion fund of INR 500 Cr to drive and support EV adoption and charging infrastructure development. A cross departmental steering committee will be constituted to manage the fund and to institutionalise a mechanism for target driven utilisation of the same. A strategic roadmap for fund utilisation with milestones and measurable outcomes will be developed in consultation with global EV promotion bodies and experts.

The fund will be utilised to extend financial assistance to strategic EV ecosystem development proposals on demand side. The fund assistance will be available to State entities, Shared Mobility companies and private institutions for activities covered under the demand simulation and charging infrastructure development roadmap. The quantum of the support will be decided on case to case basis in consideration of project viability gap, impact and strategic value towards long terms goals of this policy.

10.1.2. Roadmap for Demand Simulation

Following roadmap is defined to ensure an accelerated adoption across segment and usage categories.

a) State tax waivers on all (transport/non-transport) EVs (including Strong/Plug-in hybrids) purchased till 2023, to bridge the price gap between EVs and ICE Vehicles. The waivers for Hybrids will cease in 2023 and will be reviewed for full Electric vehicles in 2022 as per the demand scenario.

b) Stimulated demand for EVs through areas of quick adoption such as Taxi services, Public Transport, and Institutional transportation.

c) Access to financial support from State EV Promotion fund for EV adoption programmes by Shared mobility companies, Private institutions, individual buyers and State Entities

d) Preferential Allotment to Make in Telangana Electric Vehicles (including Strong/Plug-in Hybrids) for Government Orders.

10.1.3. General Exemption for Electric Vehicles

- Life time road tax exemption for electric vehicles (including Strong/Plug-in Hybrids) across all categories purchased till 2023, the expected year of price parity with ICE vehicles.

- Exemption of all fees under Motor Vehicles Act 1988 (registration fees, Fitness renewal and permit fees) for all Electric Vehicles (including Strong/Plug-in Hybrids) purchased till 2023
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10.1.4. EV in Shared Mobility

a) New permits will be issues in a phased manner for transition of the 3-wheelers towards electric (high speed).

b) Financial institutions will be engaged to provide loan at discounted interest rates for purchase of E-Autos

c) Permission for ARAI certified E-rickshaw with advance battery in fringe areas at the periphery of GHMC limits in predefined zones and routes will be examined.

d) Ride hailing services will be allowed to operate electric 2 wheelers.

e) Battery operated feeder shuttle services (up to 20 seater) at all Hyderabad Metro Stations for last mile connectivity, operated in PPP mode through STU


g) Existing state self-employment schemes will be extended to provide financial assistance for purchase of Electric Auto rickshaws and Electric cars for commercial purposes by individual buyers.

10.1.5. EV in Public/Institutional Transport

a) Telangana State Road Transport Corporation will work towards a time bound migration of its bus fleet towards electric buses for intra-city, intercity and interstate transport. This migration will be supported by financial assistance from state EV Promotion Fund and milestones will developed in due course in consideration of technology emergence and charging infrastructure development.

b) Airport flight shuttles and PUSHPAK buses will be transitioned to EV on priority.

c) Government vehicles (owned and contractual) will gradually switch to all-electric (including Strong/Plug-in Hybrids), in a phased manner. Deployment roadmap will be developed in due course in consideration of technology emergence and applicability of available vehicles.

d) Tourist places (national parks, ecological sites) in the state to switch to all EVs in a phased manner for transportation in and around their premises.

e) Creation of a state agency for Electric Vehicle demand aggregation and procurement of Electric Vehicles for deployment across State departments will be examined

10.1.6. EV in Corporate Transport, Hospitals and Educational Institutes

a) Corporate offices with an annual turnover of Rs 100+ Crore operating within HMDA limits will be encouraged to migrate their employee commuting fleet to EVs. The same will be extended to corporate entities operating in other cities in the state.

b) Encourage Educational institutions and hospitals to migrate their Buses/ Derivatives/Passenger vehicles fleet to Electric Vehicles.

10.1.7. EV in Freight Transport, Logistics and Delivery Services and other applications

a) Freight and logistics firms will be encouraged to use Electric Vehicles in a phased manner.

b) Intra-city goods delivery services (sub 2T category) to switch to EVs by 2030 in a phased manner.

c) Delivery services (courier, app based and e-commerce) will be encouraged to switch their vehicle fleet to EVs.

d) Use of Battery operated Application vehicles will be encouraged in government departments such as Municipal Corporations, Postal Services etc. across Telangana State.
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10.1.8. EV for personal mobility

a) Interest-Free loans up to 50% of the cost will be made available to all eligible state government employees for purchase of EVs. The scheme will also cover Strong/Plug-in Hybrids till 2022.

b) Only Electric vehicles will be defined in high traffic density areas, Heritage zones, IT SEZs and similar Zones in Hyderabad by 2025. Same will be applied to other cities in Telangana State.

10.1.9. Support for Charging Infrastructure

a) The Government of Telangana will work with GOI for the development of common standards for batteries and charging infrastructure to ensure interoperability wherever possible.

b) Government of Telangana shall provide capital subsidy of 25% of charging equipment/machinery, subjected to a maximum of INR 5,00,000/station for the first 500 fast charging/swapping stations during the policy period. The service provider can only avail either subsidy from Government of Telangana or FAME II subsidy from Government of India.

c) Government will facilitate setting of up initial batch of fast charging stations in GHMC and other cities in a phased manner, by state entities and private players. Fiscal support from the State EV Promotion fund will be extended for the same. Quantum and mechanism for the support will be defined by EV Steering committee in due course.

d) Charging points for personal vehicles of Government employees would be provided at Government office parking lots, starting with Hyderabad, followed by other cities in the state.

e) State DISCOMS will evaluate to establish public charging stations directly or under licensee/franchise/PPP model. Various public places such as airports, railway/ metro stations, parking lots, bus depots, markets, and malls will be examined for the same.

f) Duty exemption on power tariff to public charging stations for a duration of 10 years.

g) A viable business model will be developed for private players to set up ARAI compliant EV charging/swapping infrastructure.

h) Supply of Renewable energy will be ensured on preferential basis at special tariffs for EV charging stations with zero connection cost and wheeling charges.

i) Land belonging to Government Agencies within Hyderabad and other cities will be offered to private players on a long-term lease at subsidized rates and 2 year moratorium period on rental payment for setting up charging/swapping stations, through a transparent bidding process.

j) 100% net SGST reimbursement will be made for private EV charging service providers for first 5 years of their commercial operation.

k) 75% of SGST paid on the fast charging equipment/ machinery procured by any entity for setting up private/public/institutional charging stations will be reimbursed.

l) The electric vehicle charging infrastructure in building shall be guided by Model Building Bye-Laws 2016, as suggested by Ministry of Housing and Urban Affairs, Govt. of India.

m) All existing apartment associations with 200+ families will be encouraged to provide charging points in parking lots and fiscal support from the State EV Promotion fund will be extended for the same. Quantum and mechanism for the support will be defined by EV Steering committee in due course.

n) Existing Residential Townships with 1000+ families will be encouraged to develop charging stations lots and fiscal support from the State EV Promotion fund will be extended for the same. Quantum and mechanism for the support will be defined by EV Steering committee in due course.
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o) A battery disposal infrastructure model will be created to facilitate deployment of used EV batteries.

p) Charging/ swapping station will be provided at every 50 km within state boundaries on highway to cities like Bengaluru, Mumbai, and Chennai, followed by other national/state highways.

q) HMR stations and TSRTC Bus depots (across the state) will provide reserved parking and charging points for two-wheelers in their parking zones to encourage EVs for last mile commute.

r) Government will develop Night time community parking with charging facility in PPP mode for e-Autos, Shared mobility taxis and public transport vehicles within Industrial zones.

10.1.10. Other Infrastructure Support

a) Shared showroom for EV vehicles: Showroom space is one of the major cost for dealerships. To reduce this cost, Govt. shall build a physical marketplace for all EV’s, where space will be provided on a subsidized basis for dealers/OEMs. This infrastructure will also help in building awareness among the users, thereby increasing adoption.

10.2. Supply Side Incentives

Since EV industry is an emerging sector with its inherent risk due to technology and demand uncertainty, EV industry in Telangana state will be assigned a Priority sector status. This will be to ensure adequate government support and improved investor confidence.

Moreover, Local manufacturing and R&D is key to reaching price/performance parity between Electric and ICE Vehicles. Hence, support will be extended to EV manufacturers through policy interventions and Incentives with focus on research, innovation and skilling. EV manufacturers in the state will be encouraged towards local sourcing through tax benefits linked with localisation content.

The Government will provide benefits/incentives, depending upon the scale of investment as per the categories defined in MSMED Act 2006 and Telangana Industrial Policy framework 2014. Investments beyond Rs 200 Crores will be treated as Mega Projects and will be offered tailor made benefits.

Regarding Plug-in Hybrid technology based products, a dedicated line for Plug-in Hybrids vehicles within an existing OEM facility for ICE vehicles will be treated as a standalone investment and will be extended same benefits as EV enterprises as per the scale of investment in the new dedicated line. Component suppliers for Plug-in Hybrids will be granted same status as EV component suppliers with same benefits.

10.2.1. Infrastructure Support

a) EV Cluster: A mega Automotive Park with global standard infrastructure is currently at the planning stage and the development work is expected to commence by mid-2018. A designated EV cluster spread over 1500-2000 acres catering to EV/EV component manufacturing for two-wheelers, Cars, Buses, and Trucks will be integrated with the Automotive Park plan. The EV cluster will have common facilities specific to the requirements of EV units, as given below.

I. Shared facilities to meet staffing and training requirements.

II. A common facility for Design, prototyping, and testing available to all units in the cluster.

III. An Automotive Suppliers Park(ASP) to improve the logistics competitiveness for the units.

IV. Common infrastructure such as Drainage/ Common Effluent Treatment Plant (CETP)/Sewage Treatment Plant (STP) and utilities such as Power, Gas and Water.
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V. A State-of-art Business environment with facilities such as Convention and exhibition centres.

VI. A Logistics Hub to provide with multimodal transport for safe and efficient handling of cargo.

VII. Built-Up Space with ready factory sheds will be developed to be used mainly by MSME units.

b) Automotive Electronics Cluster: Electronics constitute a major chunk of an EV with battery at the core of the product. An Automotive Electronics Cluster will be developed within the proposed Electronics city near Hyderabad where special status and incentives will be accorded to units manufacturing electronic components including batteries cells/Packs for EVs.

c) Land: - Allotment of land will be carried out across three categories, as given below

- Plots in Integrated Automotive Parks and EV Clusters developed by TSIIC for purchase or on lease with common facilities such as internal infrastructure, ETP etc.
- Individual Plots on stand-alone basis outside the Industrial Parks developed by TSIIC.
- Land for Development of Automotive Park / EV Cluster developed through privately owned or PPP modes of investments.

d) Industrial Water: Government has earmarked 10% water from all existing and new irrigation sources for industrial utilization. Water will be provided at subsidized rates to Mega Projects.

e) Industrial Power: 24*7 Power supply is a norm for Industrial units operating in Telangana State. Furthermore, Power Tariff Subsidy and duty exemption will be extended to EV units in the state.

EV units will be allowed to avail renewable energy under open access system from within the state after paying cost component to DISCOMs as fixed by ERC.

f) Support Infrastructure: Support infrastructure like roads, power, and water will be provided at doorstep of the industry for standalone units through Infrastructure assistance under IIDF (including exemption from paying various charges to local bodies and government agencies).

g) Environmental Infrastructure: In the Auto Parks / EV Clusters, Government will facilitate the development of a CETP/ STP in PPP mode by engaging experienced firms. Units in that Park will use these facilities on a pay-per-use basis.

10.2.2. Research and Development
Considering that the EV technologies is fast evolving, the need for Research and Development is key to accelerate the parity point of price/ performance with ICE vehicles. It will also help develop solutions as per local operating conditions and local supply chain considerations.

a) Smart Mobility Technologies Cluster (SMT): Tech start-ups are the new breeding ground for ground-breaking innovation and Telangana supports them through T-Hub, India's biggest Incubation centre. T-Hub has launched a start-up incubation programme named Smart Mobility Technologies cluster, to promote innovation in advance mobility space, particularly EVs.

SMT Cluster will form a mentor board in partnership with EV, shared mobility and Energy firms to help start-ups translate their ideas into a viable business model. An Incubation fund with Industry
support will be created to provide financial support to Start-ups in EV space. The state government will work with PSU banks to develop a mechanism to provide collateral-free loans to start-ups.

b) **Mobility Engineering Cluster**: A Mobility Engineering Cluster (along the lines of the MCity at Univ. of Michigan, US) will be developed with Industry partnership. This facility with its state of the art infrastructure is envisaged to establish a global benchmark in design, development, and validation for EVs and autonomous/connected mobility. The services of this facility will be available to EV makers across India, with preferential access to partnering OEMs and units based out of Telangana.

c) **Centre of Excellences**: State Government will partner with premier Technical Institutes and research establishments across the state to establishing Centre of Excellence's for conducting market-focused research on Battery Technologies, battery management, motors, and controllers. State Government will seek Industry participation and leverage GOI EV policy to provide grant to these centres. NFTDC (Non-Ferrous technologies Development centre) at Hyderabad is running once such COE on electric vehicle technologies, under GOI FAME scheme.

d) **EV Research Hub**: A dedicated facility with special incentives will be developed to house EV R&D centres by domestic and global EV Majors. Hyderabad’s strength in Technology domain will be leveraged to provide quality manpower for such centres. This hub is also expected to attract global R&D activities on other emerging mobility trends such as connected and autonomous vehicles.

e) **Telangana EV Innovation Fund**: An Innovation fund will be created by the government to offer financial support to EV OEMs, Ancillaries and Start-ups for research and innovation in Battery technologies. Yearly awards will be instituted to recognize breakthrough work in Battery Technologies in separate categories for OEM’s, ancillaries and start-ups.

f) **EV Testing Facility**: One of the major costs for the industry is the testing of components and vehicles for compliance with global standards. Telangana State will pursue with the GOI to bring a National Automotive Testing and R&D Infrastructure Project (NATRIP) for Electric Vehicles to the state.

g) **T-Works Automotive Prototyping centre**: Recognised as India’s largest Prototyping Centre, T-WORKS will have a dedicated wing for prototyping of Electric Vehicle components/assembly. Industry partnership in the same will be invited from EV OEMs and large component manufacturers. The facility will serve start-ups and MSME units in the EV space at subsidized rates.

10.2.3. Skill Development

Availability of quality manpower in good supply is key to supporting any Industrial operation. State will identify nature and quantum of skillset required by the institute to develop and execute training programmes on EV design, development, and manufacture through various channels.

a) **TASK**: Telangana Government has set up a body called TASK (Telangana Academy of Skill and Knowledge) on lines of the National Skill Development Corporation (NSDC), a not-for-profit company under the Companies Act, 2013. A dedicated Skill development Centre for EV/EV component manufacturing on PPP model will be set up under the aegis of TASK and with support from EV Industry. TASK will also develop digital certificate courses for EV technologies for continued skill enhancement in view of evolving EV technologies.

b) **Finishing Courses**: Short-term (4-6 months) finishing course post completion of graduate Engineering courses will be introduced in select Engineering Colleges and Premier Technical Institutes in collaboration with Global Tech Universities. These courses will be designed in consultation with EV Industry and will include short internship module at partnering OEMs.

c) **PG Courses on EVs**: 2-year PG course on EV Technology will be initiated in partnership with premier institutes such as IIT Hyderabad and IIIT Hyderabad and in consultation with EV industry.
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10.2.4. Battery Cell Manufacturing and Assembly Promotion

Batteries and related components make up a substantial part of EV. Manufacture and assembly of Advance* batteries will be encouraged in the State by means of special status and incentives. Preferential allotment will be made to units involved in Advance Battery products and related electronics in the Automotive Electronics Park.

*Lithium ion and other battery chemistries with comparable/better performance parameters such as charging cycle, charge density, charging time etc.

10.2.5. Charging/swapping Equipment Manufacturing Promotion

Development of a charging network is dependent on a quality supply of charging/swapping equipment and machinery. Local manufacturing of Charging/Swapping equipment will be encouraged by means of policy support and incentives.

10.3. Other Policy Interventions

a) **Single-Window System**: Telangana implemented TS i-PASS in 2015, an Industrial Project approval system based on self-certification. It also protects Investors interest with Right to Single Window Clearance and provision for penal action on the officers who delay the applications. An escort officer will be appointed at Commissioner of Industries and TSIIC office to ensure fast-tracked clearance and grievance redressal for applications received from EV vehicle/component manufacturers. Escalation at various levels and regular monitoring will be done on a time-bound basis to ensure quick turnaround time for any application pertaining to EV Manufacturing.

b) **Exit Mechanism**: Considering the high volatility and the risk associated with maturing of EV Technologies, Government of Telangana in consultation with Government of India will put in place a mechanism for a reasonable exit strategy for the EV enterprises.

c) **Labour Environment**: Subject to applicable laws as far as possible, the Government will consider giving permission to the Electric Vehicle and components industry for 24x7 (three shifts) operations, employment of women in night shifts, flexibility in employment conditions including working hours for women and shorter/ longer shift timings, extended overtime hours permissible per quarter and hiring of contract workers. The EV industry will be declared a ‘Public Utility' under the Industrial Disputes Act, 1947 in order to prevent flash strikes

d) **Technical Committee to certify/define an EV enterprise**: A Technical Committee will be constituted with a mandate to certify/define Vehicle/ components Manufacturers including EV lithium-ion battery units claiming incentives and concessions under Telangana Electric Vehicle Policy

e) **Telangana State EV Advisory council**: A "State Electric Vehicle Advisory Council" shall be constituted with support from SIAM, ACMA, SMEV, CII, FICCI and other industry associations. This council and will have distinguished members from Industry, Academia, and Research who will review the progress of EV policy initiatives on both demand and supply side. The council will advise the Government on remedial measures needed to address any concern as well as course corrections at the policy level. This Consultative Committee shall also facilitate coordination with Government of India in areas requiring support for effective development of EV ecosystem in the state.

f) **Steering Committee for EV Promotion**: A Steering Committee comprising of senior officials from relevant departments will be constituted. The steering committee will have a mandate of time-bound EV demand creation and charging network development in Hyderabad City followed by other cities/smart cities within the State. The steering committee will also be responsible for managing the EV promotion fund and institutionalising a mechanism for target driven utilisation of the same. **Steering committee will also be responsible for periodic review of EV policy based on inputs from the EV advisory council.**
Draft for Discussions

11. Conclusion

The rapid growth in urbanization and the surge in the number of vehicles on roads has led to an immediate need for a sustainable model for personal and public mobility in urban centres to address the rising pollution and infrastructure imbalance concerns. Electric Vehicles has emerged as one such mobility solution that holds best promise in terms of sustainability and mass adoption with its pace of technology advancement and cost rationalization. Electric Vehicle technology integrations with the community transport and shared mobility make the promise even stronger. Telangana state electric vehicle policy strives to create a policy framework for the accelerated development of an Electric Vehicle ecosystem development, comprehensively addressing both the demand and supply side gaps and laying emphasis on charging infrastructure creation. This policy is designed to make Telangana state the Electric Vehicle capital of India and we invite Industry and stakeholders support in achieving the same.