

मध्यप्रदेश शासन
नगरीय विकास एवं आवास विभाग
मंत्रालय, भोपाल

// आदेश //

भोपाल, दिनांक 01/11/2019

क्रमांक एफ-10-25/2019/18-2:: राज्य शासन एतद्वारा प्रदेश में इलेक्ट्रिक वाहन नीति में वर्णित समस्त प्रकार के इलेक्ट्रिक वाहनों पर 01 प्रतिशत (एक प्रतिशत) मोटर व्हीकल टैक्स लगाये जाने संबंधी संशोधन के साथ संलग्न नई इलेक्ट्रिक वाहन नीति-2019 को प्रदेश में लागू किये जाने की स्वीकृति प्रदान की जाती है।

संलग्न: इलेक्ट्रिक वाहन नीति-2019

मध्यप्रदेश के राज्यपाल के नाम से
तथा आदेशानुसार

(मनीष सिंह)

उप सचिव

मध्यप्रदेश शासन

नगरीय विकास एवं आवास विभाग

भोपाल, दिनांक 01/11/2019

पृ. क्रमांक एफ-10-25/2019/18-2

प्रतिलिपि:-

1. प्रमुख सचिव, (समन्वय), मंत्रालय, भोपाल की ओर मंत्रि-परिषद आदेश दिनांक 15.10.2019 के आयटम क्रमांक 04 के संदर्भ में,
2. प्रमुख सचिव, माननीय मुख्यमंत्री जी, मंत्रालय, भोपाल, मध्यप्रदेश,
3. प्रमुख सचिव, मध्यप्रदेश शासन, वित्त विभाग/ऊर्जा विभाग/उद्योग विभाग/तकनीकी शिक्षा कौशल विकास एवं रोजगार विभाग/परिवहन विभाग, नवीन एवं नवकरणीय ऊर्जा विभाग, वाणिज्यिक कर विभाग, मंत्रालय, भोपाल,
4. आयुक्त, नगरीय प्रशासन एवं विकास, संचालनालय, भोपाल, मध्यप्रदेश,
5. आयुक्त, परिवहन मध्यप्रदेश मध्यप्रदेश,
6. समस्त आयुक्त, (राजस्व) मध्यप्रदेश,
7. समस्त कलेक्टर, मध्यप्रदेश,
8. समस्त आयुक्त नगर पालिक निगम, मध्यप्रदेश,
9. समस्त संयुक्त संचालक, नगरीय प्रशासन एवं विकास, मध्यप्रदेश,
10. समस्त मुख्य नगर पालिका अधिकारी, नगर पालिका परिषद/नगर पंचायत, मध्यप्रदेश,
11. श्री नरेन्द्र भगत, वेब कंटेंट मैनेजर, संचालनालय, नगरीय प्रशासन एवं विकास, पालिका भवन भोपाल की ओर आदेश एवं संलग्न इलेक्ट्रिक वाहन नीति- 2019 को विभाग की वेब साईड पर अपलोड करने हेतु प्रेषित।
12. गार्ड फाईल,
की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

उप सचिव

मध्यप्रदेश शासन

नगरीय विकास एवं आवास विभाग

MADHYA PRADESH ELECTRIC VEHICLE (EV) POLICY 2019



URBAN DEVELOPMENT & HOUSING DEPARTMENT
Government of Madhya Pradesh

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FOREWORD

Historically, mobility and fossil fuels have been inextricably linked with electric vehicles being successful only in a few niche markets. However, over the last decade, a collection of circumstances have conspired to create an opening for electric mobility to enter the mass market. The government of Madhya Pradesh has actively taken up the subject of upliftment of Public Transport under various State and Centre sponsored schemes such as Dedicated Urban Transport Fund (DUTF), Atal Mission for Rejuvenation and Urban Transportation (AMRUT) and other foreign aided projects. Though continuous efforts are being made to expand the public transport infrastructure (rolling and solid stock) across the cities of Madhya Pradesh.

The Urban Development and Housing department of Madhya Pradesh has prepared “Madhya Pradesh Electric Vehicle (EV) Policy 2019” to accomplish the objectives of ‘Electric Vehicle Initiative (EVI).

Electric Vehicle Initiative (EVI), under Madhya Pradesh Electric Vehicle (EV) Policy 2019, is dedicated to accelerating the deployment of EV’s. The government of Madhya Pradesh has actively taken the subject of EVI. Adoption of Electric Vehicle for Road Transport contributes to a wide range of goals. These include better air quality, reduction in noise pollution, enhanced energy security and in combination with a low carbon power generation mix, reduced greenhouse gas emission. Though continuous efforts are being made to expand the EVI network in cities, but considering the present situation of air quality in state, EVI is expected to play a pivotal role in controlling noise and air pollution. Despite Central and State Government incentives, pure electric vehicle penetration currently remains quite low in India, about 0.1% for cars, 0.2% for 2 wheelers and practically nil for commercial vehicles. This is largely driven by following critical hurdles, Low level of investment in EV manufacturing capacity, High upfront purchase price of EVs, Lack of Initiative in this program, Lack of product comparable to ICE vehicles and lack of ICE vehicles discouraging policy(especially in 2 wheeler vehicles).

The main objective of EVI is to bring about a material improvement in air quality by bringing down emissions from transport sector. To do so, this policy will seek to drive rapid adoption of Electronic Vehicles (EV) in a manner where they contribute to 25% of all new vehicle registration by 2026. Currently, the local bodies of state, lack the initiative required to improve air quality, but this policy will play pivotal role in this. In addition, there is a pressing need to inculcate behavioural change among the citizens and capacity among stakeholders to ensure successful implementation of EVI in state. The policy shall act as a guiding document for the local bodies by setting the context, priorities and direction to ensure proper implementation of EVI across all the areas of the state.

TERMINOLOGIES

Advance Battery: Advance Battery' represents the new generation batteries such as Lithium polymer, Lithium Iron phosphate, Lithium Cobalt Oxide, Lithium Titanate, Lithium Nickel Manganese Cobalt, Lithium Manganese Oxide, Metal Hydride, Zinc Air, Sodium Air, Nickel Zinc, Lithium Air and other similar chemistry under development or under use.

Authority: Any GoMP department, agency or official nominated by Madhya Pradesh Urban Development And Housing Department for enforcement or implementation of provisions of Madhya Pradesh Electric Vehicle (EV) Policy 2019.

AC Chargers: Batteries are DC and needs DC power for charging it. If the public chargers (also known as off- board chargers) are DC chargers, the batteries / vehicles could be charged directly. For public outlets feeding AC supply to the EV, the chargers are on-board and these on-board chargers are supplied by vehicle manufacturer.

Battery Electric Vehicle: The term battery electric vehicle (BEV) refers to automobiles with only electric motor and advanced batteries (to power the engine) with similar or more energy density than that of a Lithium Ion battery. Hybrid electric vehicles with fossil fuel based engines, are not covered under this policy.

Charging: All functions necessary to condition standard voltage and frequency AC supply current to a regulated voltage/current level to assure proper charging of the EV traction battery and/or supply of energy to the EV traction battery bus, for operating on-board electrical equipment in a controlled manner to assure proper energy transfer.

Charging/Battery Swapping Equipment: Equipment that is exclusively used to charge the battery or swap the battery inside a BEV. These equipment can be installed at existing fuel stations or separate charging or battery swapping stations. This policy doesn't cover incentives for manufacturing any supporting equipment (such as transformers, junction boxes etc.) that is not exclusive to BEV charging/swapping equipment.

Charger Classification: With reference to the charger types discussed above, it is more appropriate to classify chargers based on power rating instead of the rate of charging vis-à-vis "slow-chargers" or fast-chargers". The definition of "slow chargers" and "fast chargers" is not sufficient, as the same charger should be acting as a slow charger or a fast charger depending upon the vehicle to be charged. For example, a 2.5KW charger will be slow charger for a 4-wheeler but could be a fast charger for a 2-wheeler.

Dedicated off-board charger: Off-board charger designed to be used only by a specific type of EV, which may have control charging functions and/or communication.

Electric Vehicle: Electric Vehicle (EV) refers to automobiles using an electric motor that is driven by either batteries, ultra capacitors or fuel cells.

Electric Mobility Ecosystem: This policy addresses various components and end products of the electric mobility ecosystem. Such an ecosystem encompasses the "Electric Vehicles and components such as Lithium Ion Batteries (or other advanced batteries with

comparable energy/power densities), Super capacitors, Fuel cell systems, EV Charging equipment, Hydrogen generation, storage and refuelling equipment, Battery swapping equipment, EV Motors & Controllers and other EV powertrain components, Battery management systems, EV electronics, electric harness etc. integral to the functioning of an EV.

EV Charger: An EV charger, also called Electric Vehicle Supply Equipment (EVSE) is an element in EV infrastructure that supplies electric energy for recharging the electric vehicles. As proliferation of EVs depends on access to the charging infrastructure, the nation needs to follow common specifications and standards for the infrastructure be used for all categories of vehicles and help it scale seamlessly.

Fuel Cell Electric Vehicle: Fuel Cell Electric Vehicle (FCEV) refers to the vehicle which uses a fuel cell in combination with a battery or super-capacitor, to power its on-board electric motor. Fuel cell in vehicles generate electricity to power the motor, by using hydrogen as fuel.

MPUDHD: Madhya Pradesh Urban Development And Housing Department.

MPIPP: Madhya Pradesh Industrial Promotion Policy 2010 as applicable with amendments

On-board charger: Charger mounted on the vehicle and designed to operate only on the vehicle.

Off-board charger: Charger connected to the premises wiring of the a.c. supply network (mains) and designed to operate entirely off the vehicle. In this case, direct current electrical power is delivered to the vehicle.

Private Charger: The home private chargers are generally used with 230V/15A single phase plug which can deliver a maximum of up to about 2.5KW of power. Thus, the vehicles can be charged only up to this rate. The billing for the power is part of home-metering. This will be continued till a policy evolves to charge the home users differently for EV use, however, inclusion of RCD (Residual Current Devices) should be ensured. IEC 60309 Industrial connector to be used from both ends. The existing Indian safety guidelines should be followed.

Public Charger: For charging outside the home premises: the electric power needs to be billed and payment needs to be collected. Further, the charges may depend on state of grid (whether it is power-surplus or is in power-deficit state). The power utilities may also want to manage power drawn by these chargers from time to time.

UltraCapacitors: An ultra-capacitor, also known as a super-capacitor, or electrochemical capacitor, is a device for storing electrical energy.

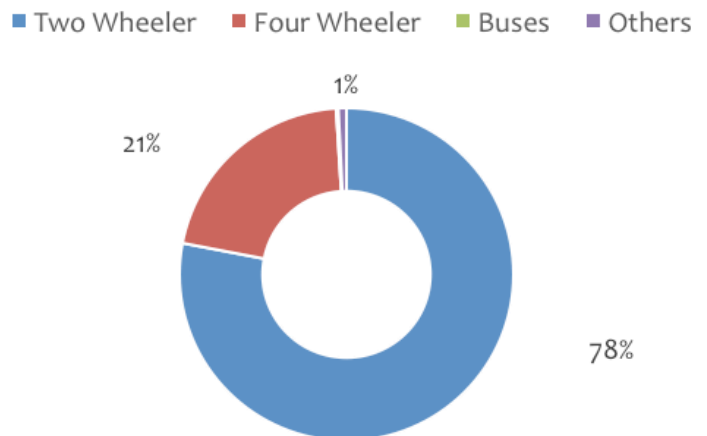
ABBREVIATION

AMRUT	Atal Mission for Rejuvenation and Urban Transformation
ARAI	Automotive Research Association of India
AC	Auto Clusters
ASMC	Automotive Suppliers Manufacturing Centres
BEV	Battery Electric Vehicles
BSO	Battery Swapping Operators
CI	Charging Infrastructure
CIRT	Central Institute of Road Transport
CAPEX	Capital Expenditure
CSR	Corporate Social Responsibility
DL	Driving Licence
EV	Electric Vehicle
EESL	Energy Efficiency Services Limited
EV2X	Electric Vehicle To Everything
ER	E-Rickshaws (ER)
ECS	Equivalent Car Spaces
EO	Energy Operators
EMS	Electric Mobility Cell
FAME	Faster Adoption and manufacture of (Hybrid &) Electric Vehicles
FCEV	Fuel Cell Electric Vehicle
GoMP	Government of Madhya Pradesh
GOI	Government of India
ICAT	International Centre for Automotive Technology
ICE	Internal Combustion Engines
ISBT	Inter State Bus Terminals
MPEMB	Madhya Pradesh Electric Mobility Board
MOHUA	Ministry of Housing and Urban Affairs
MPPCB	Madhya Pradesh Pollution Control Board
NBFC	Non-Banking Financial Companies
NUTP	National Urban Transport Policy
RWA	Residents Welfare Associations
STU	State Government Transportation Units
SC	Skill Centres
TSR	Three-Seater Auto-Rickshaws
UDHD	Urban Development & Housing Department (UDHD)
VRDI	Vehicle research and development establishment

1. BACKGROUND

Madhya Pradesh is the second largest State of the country. Covering almost 9.5% of the area (308,000 sq.km), it has 6% (72.5 million) (Census 2011) of the country's total population. According to the 2011 Census, the State has registered 25 percent decadal growth in urban population when compared against data from 2001 census. The transportation needs for the state are catered by 4,709km of National Highways, 10,859km of State Highways, 19,574km of Major District Roads and 24,209km of Rural Roads.

The road network in MP currently services traffic which has increased at an average rate of 12.91% from year 2000 to 2010. The transport policy of MP predicts that the number registered commercial vehicles in the state will increase at the rate of 10% annually. The share of all the modes of transport out of a total 60 lakh registered in the state is presented in Figure 1.



From the year 2011 to 2014 alone, the number of newly registered vehicles in MP was over 23 lakhs. 90% of these vehicles constituted of two wheelers and four wheelers used for private transit. Estimating from these numbers, almost 2,000 newly registered two and four wheelers are introduced in the state every day. This cuts a bleak figure in terms of vehicular emissions as tailpipe emissions have been proven to be a significant aggregator towards increasing levels of air pollution.

Special Purpose Vehicles (SPV) have been constituted in 20 cities for implementing the cluster-based bus system comprising of authorities (Mayor, Collector, Municipal Commissioner/ Chief Municipal Officer, Traffic Police, RTO, Police, Municipal Corporation) from various Urban Local Bodies (ULB). The role of these SPVs is to facilitate, regulate, oversee and strive to grow intra-city as well as inter-city public bus transport in MP and their respective cities. For putting the project in action, 3 major components were devised,

- (i) Bus Procurement & Operation,
- (ii) Intelligent Transport Management System (ITMS),
- (iii) Bus Terminal & Bus Stops Development

Recently, under the central government's scheme AMRUT, buses have been slated to be provided to various SPVs in the state. Out of these 438 buses have been put into operations. These buses will connect small cities/ villages of the state to the larger cities in MP.

Madhya Pradesh Electric Vehicle (EV) Policy 2019

This system is intended to provide the citizens of the said cities/villages accessibility to services like healthcare, education, employment etc. present in the bigger cities in the state.

The Madhya Pradesh Electric Vehicle (EV) Policy 2019, to be notified by the Government of Madhya Pradesh ('GoMP') and which will remain valid for five years from the date of notification, recognises that a new approach is required to kick-start EV adoption in Madhya Pradesh. It will therefore seek to put in place measures that address the key hurdles to EV adoption. The Government of Madhya Pradesh ('GoMP') will also develop a communication plan focused on driving awareness regarding the benefits of adopting electric vehicles and the key elements of this policy.

This policy will apply exclusively to Battery Electric Vehicles (as defined in Annexure -1, FAME India). Mild Hybrid, Strong Hybrid and Plug-in Hybrid Electric Vehicles will not be targeted by this policy. 'FAME India' in this policy refers to the Scheme for Faster Adoption and Manufacturing of Hybrid & Electric Vehicles in India as notified on 13th March, 2015 by the Govt. of India and any subsequent amendments thereof.

Internal combustion engines (ICEs) are one of the key technological innovations that have facilitated faster and efficient movement of both people as well as goods. Over the decades, an improvement in their efficiency, an increase in oil drilling and innovation in manufacturing have brought considerable momentum to adoption and growth of automobiles and fuelled economic growth.

The Government of Madhya Pradesh ('GoMP') understands that the transformation has to begin in cities over the next decade while the charging infrastructure are built to support the adoption of EVs. It is foreseen that adoption of EVs might begin with public transportation, stage carriers and commercial taxi & scooter fleet providers, given the comparable total cost of ownership between EVs and ICE vehicles in their usage model. As parity between the cost of an EV and ICE vehicle is achieved along with proliferation of charging infrastructure inside the cities and on highways, the end of next decade could potentially see mass adoption of EVs.

The GoI has provided tremendous support for EVs through incentives under "Faster Adoption and Manufacturing of Hybrid and Electric Vehicles" (FAME) Policy. The Ministry of New and Renewable Energy has also supported R&D and demonstration projects on various aspects of hydrogen energy including its production, storage and use as a fuel for generation of mechanical / thermal / electrical energy. Accordingly, the Government of Madhya Pradesh has identified Electric Mobility space to be robust growth driver in the years to come. It aims to be a frontrunner in building a sustainable transportation infrastructure by promoting Electric Mobility Ecosystem in Madhya Pradesh.

2. OBJECTIVES

2.1. The primary objective of the Madhya Pradesh Electric Vehicle (EV) Policy 2019 is to promote sustainable electric mobility and bring about a material improvement in Madhya Pradesh air quality by bringing down emissions from transport sector. To do so, this policy will seek to drive rapid adoption of Electric Vehicles (EVs) in a manner where they contribute to 25% of all new public transport vehicles registrations by 2026.

2.2. To enable faster adoption of electric vehicles in Madhya Pradesh by ensuring safe, reliable, accessible and affordable Charging Infrastructure eco-system and promoting the renewable energy usage in charging infrastructure.

2.3. This policy will also seek to put in place measures to support the creation of jobs in driving, selling, financing, servicing, charging and manufacturing of EVs.

3. SCOPE OF POLICY

3.1. This policy is applicable only to EVs and the components that are integral to its manufacturing and operation (EV charging or BEV (Battery Electric Vehicle) battery swapping infrastructure).

3.2. Firms availing incentives under this policy will not be eligible for incentives under the the industrial policy of the GoMP. Separate guidelines will be issued for implementation of this policy.

3.3. Private Transport - In order to achieve the above-mentioned goals and objectives, the policy targets a substantial substitution of currently registered ICE vehicles being used with various electric vehicles throughout MP.

3.4. Public Transport - Through this policy the existing intracity bus fleets in the state will be augmented (or substituted) by electric buses to reduce energy consumption, harmful emissions in public transport sector and improve local and global air quality. Cities of the state where electric bus operations are not warranted due to low population, e-rickshaws, e-auto rickshaws will be promoted as modes of public transport. Assimilation of electric buses in current public transport bus fleets throughout the state.

3.5. Charging infrastructure - This policy will provide the guidelines for development of adequate charging infrastructure for various EVs, both as public and private transit entities and usage of renewable energy in charging infrastructure.

3.6. Introducing an online portal for information regarding EVs, applying for EV related incentives, information regarding charging infrastructure etc.

3.7. To create newer employment opportunities by promoting EV manufacturing, charging infrastructures and promoting usage of EVs in public private transport.

4. NODAL ORGANISATION

4.1. 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 2019.

4.2. The Government of Madhya Pradesh (GoMP) will setup a high level committee consisting of stakeholders from all concerned departments. The government will issue new directives to the respective departments to include any support needed for furtherance of Electric Vehicle (EV) in their operational policy under ease of doing business.

5. EXPECTED OUTCOMES

5.1. To embrace electric mobility as a tool to promote shared mobility and clean transportation and ensure environmental sustainability, pollution reduction, energy efficiency and conservation and to create an ecosystem for manufacturing EV components in MP.

5.2. To encourage reliable, affordable and efficient EVs that meet performance and price through Government - collaboration for promotion and development of indigenous manufacturing capabilities, required infrastructure, consumer awareness and technology.

5.3. Reduce primary oil consumption in transportation.

5.4. Facilitate customer adoption of electric and clean energy vehicles.

5.5. Encourage cutting edge technology through adoption, adaptation, and research and development.

5.6. Improve transportation used by the common man for personal and goods transportation.

5.7. Reduce pollution in state. The number of vehicles on the road will get reduced with the introduction of modern shared transport systems like air-conditioned electric buses, e-cabs and e-rickshaws.

5.8. Create EV manufacturing capacity that is of global scale and competitiveness.

5.9. Facilitate employment growth in a sun-rise sector.

5.10. Creation of inclusive EV infrastructure by providing city wide accessibility (including unserved and under-served areas) of all the components of EV value chain.

5.11. Enabled environment for recycling and reuse batteries.

5.12. Regular operation and maintenance of existing and proposed EV's infrastructure.

5.13. Attract investments and create employment opportunities around power electronics, battery pack assembly, battery management system, electric motors, accessories and skilled areas like IT and R&D etc.

6. LEGISLATIVE AND REGULATORY CONTEXT

6.1. LAWS, RULES AND REGULATIONS (CENTRAL)

- (i) The Motor Vehicles Act, 1988
- (ii) National Building Code, 2005
- (iii) Ministry of Road Transport & Highways (MORTH) Guidelines / Circulars

6.2. LAWS, RULES AND REGULATIONS (STATE)

- (i) Madhya Pradesh Municipal Corporation Act, 1956
- (ii) Madhya Pradesh Municipal Council Act, 1961
- (iii) Madhya Pradesh Bhumi Vikas Adhiniyam, 2012

6.3. OPERATIONAL CONTROLS/ GUIDELINES

6.3.1. Madhya Pradesh Electric Vehicle (EV) Policy 2019 and all applicable guidelines, circulars and any other regulations issued by Government of India (GoI) and Government of Madhya Pradesh (GoMP).

6.4. REVISION OF TRANSPORT REGULATIONS FOR EVS

6.4.1. All regulations below are applicable only for FCEVs (Fuel Cell Electric Vehicle) and BEVs (Battery Electric Vehicle) using advanced battery technologies with energy/power density similar or more than that of a Lithium-ion battery.

6.4.2. Electric commercial public transport will be given permits on priority by transport department.

6.4.3. Electric Autos/rickshaws will be allowed only in certain areas or outside major cities to avoid congestion.

6.4.4. Corporates will be allowed to own and operate electric vehicles for feeder transport of their employees.

6.4.5. Registration will be allowed for 2 wheelers, 3-wheelers and 4-wheelers retrofitted with an electric motor and an electric powertrain using advanced battery technologies and certified by ARAI or other government recognised agency.

6.4.6. In order to avoid congestion in cities, EVs will be mandated in cities while phasing out polluting vehicles in parallel.

6.4.7. Electric mobility blueprint will be created for the entire state for a phase wise transition to EVs.

6.4.8. Transport department shall facilitate the online registration of EVs.

7. STRATEGY

The GoMP wants to achieve its objectives by emphasising on

- (i) Driving EV Adoption
- (ii) Electric Vehicle Type Incentive Structure
- (iii) Manufacturing of EV and its Components
- (iv) Charging Infrastructure (CI)
- (v) Recycling Ecosystem – Battery and EVS
- (vi) Demand Creation for EVs
- (vii) Research & Development

8. DRIVING EV ADOPTION

To drive large scale adoption of EVs and maximise reduction of vehicle emissions, this policy will therefore focus attention on:

8.1. Incentivising the purchase and use of electric vehicles (EV) and also supporting the charging/battery swapping infrastructure of public/shared transport.

8.2. Private charging at residences / offices shall be permitted. DISCOM may facilitate the same.

8.3. Create a skilled workforce which is attuned to the needs of EV ecosystem and promote usage of Electric Vehicle (EV's) to enable transition to environment friendly cities.

8.4. Build next generation transportation infrastructure using Electric Vehicle to Everything (EV2X) platforms.

9. ELECTRIC VEHICLE TYPE INCENTIVE STRUCTURE

Following sections discuss the policy framework and incentives on the purchase of the following categories of electric vehicles.

- (i) Two-wheelers
- (ii) Shared E-Rickshaws
- (iii) Electric Auto Rickshaws
- (iv) Electric Goods Carriers (3 Wheeler)
- (v) Electric Car
- (vi) Buses
- (vii) Other Vehicles

All the electric vehicles that will be used in public transport services inside the city limits (Buses, shared rickshaws etc.) will operate under the rules and regulations constituted by the respective Urban Local Bodies and SPV where they operate.

9.1. TWO WHEELERS

The incentives listed below will be available for electric two wheelers:

9.1.1. INCENTIVES

- (i) Regulatory Incentive:
 - (a) The first 15000 electric two-wheelers or total electric two-wheelers in 5 years whichever is less, will be charged 1% (One Percent) motor vehicle tax.
 - (b) Vehicle registration fees will be exempted for 22,500 electric two-wheelers or total electric two-wheelers in 5 years, whichever is less.
- (ii) Parking Cost: All electric two-wheelers will be provided a 100% waiver on parking charges at any Urban Local Body run parking facility for an initial period of 5 years.

9.1.2. PARAMETERS

- (i) The incentives will be available for two-wheelers which fulfils the FAME India criteria or vehicles whose specifications are approved by ARAI/ CIRT/ ICAT/ VRDI or any other equivalent government agency or by UDHD.

- (ii) All the incentives shall be applicable to only those vehicles whose maximum power output does not be exceed 250 Watts.
- (iii) The incentives will be applicable to the vehicle that have an “Advanced Battery” as defined by the FAME framework of the GoI.

9.2. SHARED E-RICKSHAWS (SR)

A Shared E-Rickshaws (SR) is a small battery operated 3-wheeler vehicle which has a seating capacity of 4 passengers excluding the driver. Due to their size, speed and battery capacity these are generally useful for short journeys complimenting existing public transit options.

The number of Shared E-Rickshaws (SR) in the state of Madhya Pradesh has grown rapidly and they provide useful means for last mile connectivity. This policy will aim to support the use of shared e-rickshaws that are safe and driven in compliance with regulations, and for the replacement of e-rickshaws in addition to the FAME demand incentive:

9.2.1. INCENTIVES

a. Regulatory Incentives

- (i) The Shared E-Rickshaws (SR) will be given express route permissions on first come, first serve basis. These permissions will be provided exclusively by the respective authority and any e-rickshaw must be operated after taking these permissions whether or not the vehicle has been purchased availing the incentives outlined in this policy. The purchaser will be given a choice between different available routes which shall be defined by the respective authority. These permits will authorise the purchaser to run operations on the specified routes complementing existing public transit (if available). The number of SR's will be regulated on the routes to avoid over-saturation and provide viable earning opportunity to the purchaser. New routes will be added time to time by the authority for accommodating all the Shared E-Rickshaws (SR) and for providing the best possible last mile connectivity opportunities for the public transit commuters.
- (ii) The routes will be finalised by authority and necessary notification shall be issued by transport department. In future the route can be changed, based on public demand and movement. It might be mandatory to install GPS and monitoring system to vehicles for proper regular monitoring.
- (iii) Regulatory Incentive:
 - (a) The first 5000 Shared E-Rickshaws or total Shared E-Rickshaws in 5 years, whichever is less, will be charged 1% (One Percent) motor vehicle tax.

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- (b) Vehicle registration fees will be exempted for 7500 Shared E-Rickshaws or total Shared E-Rickshaws in 5 years, whichever is less.
- (iv) If permit requires for operations of electric Shared Rickshaws (SR), then first 5000 Shared E-Rickshaws or total Shared E-Rickshaws in 5 years, whichever is less, will be exempted by transport department.

b. Parking Cost

All Shared E-Rickshaws (SR) will be provided a 100% waiver on parking charges at any Urban Local Body run parking facility for an initial period of 5 years.

9.2.2. PARAMETERS

- (i) The purchaser must have a driver's license.
- (ii) The purchaser must procure an Shared E-Rickshaws (SR) which has been approved by either ARAI/ CIRT/ ICAT/ VRDI, FAME India scheme or UDHD.

9.3. ELECTRIC AUTO RICKSHAWS (EAR)

Passenger three wheelers or 'Electric Auto-Rickshaws (EARs)' or 'Autos' are a critical part of the public transport infrastructure in Madhya Pradesh. They provide last mile connectivity and access to areas that are underserved by public transport. Madhya Pradesh Electric Vehicle (EV) Policy 2019 will aim to incentivise the purchase and use of new electric autos rickshaw ('e-autos') instead of ICE equivalents and simultaneously promote conversion of existing CNG autos to e-autos. Following incentives shall be provided by GoMP in addition to the FAME demand incentive:

9.3.1. INCENTIVES

a. Regulatory Incentives

- (i) UDHD will suggest the transport department to stop registering new ICE vehicles altogether in a phased manner.
- (ii) The first 5000 Electric Auto-Rickshaws or total Electric Auto-Rickshaws in 5 years, whichever is less, will be charged 1% (One Percent) motor vehicle tax.
- (iii) Vehicle registration fees will be exempted for 7500 Electric Auto-Rickshaws or total Electric Auto-Rickshaws in 5 years, whichever is less.

- (iv) If permit requires for operations of Electric Auto-Rickshaws, then first 5000 Electric Auto-Rickshaws or total Electric Auto-Rickshaws in 5 years, whichever is less, will be exempted by transport department.

b. Parking Cost

All Electric Auto Rickshaws will be provided 100% rebate on parking costs at any ULB run parking facility for an initial period of 5 years.

9.3.2. PARAMETERS

- (i) The buyer should have a driver license and an auto-rickshaw badge.
- (ii) The buyer can purchase a electric auto rickshaw approved by FAME/ARAI/ICAT/VRDI make and model.

9.4. ELECTRIC GOODS CARRIERS (3 WHEELER)

Electric Three wheeler goods carriers are useful for low capacity, short haul deliveries in congested areas of the city. This policy recognises their importance and will seek to incentivise the electrification of this fleet. Specific measures aimed at supporting this segment of vehicles are:

9.4.1. INCENTIVES

a. Regulatory Incentives

- (i) Regulatory Incentive:
 - (a) The first 2000 Electric Three Wheeler Goods Carrier or total electric three wheeler goods Carrier in 5 years, whichever is less, will be charged 1% (One Percent) motor vehicle tax.
 - (b) Vehicle registration fees will be exempted for 3000 Electric three wheeler goods Carrier or total Electric three wheeler goods Carrier in 5 years, whichever is less.
- (ii) If permit requires for operations of Electric Three Wheeler Goods Carrier, then first 2000 Electric Three Wheeler Goods Carrier or total Electric Three Wheeler Goods Carrier in 5 years, whichever is less, will be exempted by transport department.

b. Parking Cost

All Electric three wheeler goods Carrier will be provided a 100% waiver on parking charges at any ULB run parking facility for an initial period of 5 years.

9.4.2. PARAMETERS

- (i) The purchaser must have a driver's license.
- (ii) The purchaser must procure Electric three wheeler goods Carrier(e-Auto) which has been approved by either ARAI/ CIRT/ICAT/VRDI, FAME scheme or UDHD.

9.5. ELECTRIC CAR

Although in India, majority of the population uses two-wheelers as their primary means of transportation, use of cars is becoming more prevalent year-on-year. This trend is accentuated by the incoming and rising popularity of ride hailing services in the larger cities. Through this policy the state will try to make e-cars a viable alternative for individuals and car sharing service aggregators to the ICE cars in an effort to drive down ICE car demand and use.

9.5.1. INCENTIVES

- (i) Regulatory Incentive:
 - (a) The first 6000 electric cars or total electric cars in 5 years, whichever is less, will be charged 1% (One Percent) motor vehicle tax.
 - (b) Vehicle registration fees will be exempted for 9000 electric cars or total electric cars in 5 years, whichever is less.
- (ii) Parking Cost: All electric cars will be provided a 100% waiver on parking charges at any ULB run parking facility for an initial period of 5 years.

9.5.2. PARAMETERS

- (i) The incentives will be available for electric cars which fulfil the FAME India criteria or vehicles whose specifications are approved by ARAI / CIRT / ICAT / VRDI or any other equivalent government agency or by UDHD.
- (ii) The incentives will be applicable to the vehicle that have an "Advanced Battery" as defined by the FAME framework of the GoI.

9.6. BUSES

9.6.1. INTRA-CITY BUSES

- (i) Electric buses play a substantial part in improving a city's overall environment. Buses do this by providing a viable alternative to the private vehicles thus reducing the number of vehicles on road and subsequently tail pipe emissions. Buses also help promoting socio-economic equity by providing access to individuals from all walks of life to opportunities like jobs, education, healthcare, recreation etc.
- (ii) Through this policy UDHD will encourage city Public transport special purpose vehicle (SPV's) to replace 50% of their respective fleets with electric buses by 2026. If any of the cities do not have a functioning public transit system involving buses, then those cities will have to procure all electric buses by 2030. This acquisition shall be in tune with the standards/ guidelines set by Service Level Benchmark for Urban Transport by MOHUA i.e.1 bus per 1000 citizens.
- (iii) The operations of these buses will be done under the umbrella of city Public transport special purpose vehicle (SPV's) on both existing as well as new routes which run inside the city limits. These routes shall be finalised by UDHD and necessary notification for this shall be issued by transport department.
- (iv) Also, the bus operators who wish to scrap/ decommission their existing diesel-powered buses and replace them with electric buses shall be provided monetary aid through DUTF as decided by UDHD.
- (v) All the buses (Electric/ICE) governed by SPV while being issued permits shall be granted priority timings (departure and arrival) at the bus stands/depot and will be allocated particular bay/priority spots at the bus stands/depot.

9.6.2. INTER-CITY BUSES

- (i) Inter-city transport in Madhya Pradesh has seen immense growth in the past decades. With ever increasing road network inter-city transport is expected to reach unprecedented levels in the coming decade. This growth in patronage has attracted many private operators to run inter-city operations successfully. As a result, inter-city public transport is flourishing in the state.
- (ii) To capitalise on this trend electric buses can be run-on well-known routes connecting major cities in the state, Indore, Bhopal, Jabalpur, Gwalior and Ujjain, etc. These cities

have an extensive network transport amongst themselves and are major contributors to citizen exchange. Earlier when battery technology was inferior and unsafe due to Lead based charging mechanism, long distance travel was a far-fetched idea. Today battery technology has progressed to the point where Lithium-ion batteries have not only made it safer but charging the batteries has become much faster than before. Also, with battery swapping technology the entire process of refuelling buses has become feasible and fast.

- (iii) Public transport special purpose vehicle (SPV's) from the major cities of the state will be encouraged to run inter city e-bus operations amongst them through Public Private Partnership model as are being run currently. Further, private operators can be encouraged to switch from ICE buses to e-buses over the course of the next decade.
- (iv) All the buses (Electric/ICE) governed by SPV while being issued permits shall be granted priority timings (departure and arrival) at the bus stands/depot and will be allocated particular bay/priority spots at the bus stands/depot.

9.6.3. INCENTIVES

- (i) The first 1500 electric buses or total electric buses in 5 years, whichever is less, will be charged 1% (One Percent) motor vehicle tax.
- (ii) Vehicle registration fees will be exempted for 2250 electric buses or total electric buses in 5 years, whichever is less.
- (iii) If permit requires for operations of Electric Buses, then first 1500 Electric Buses or total Electric Buses in 5 years, whichever is less, will be exempted by transport department.

9.7. OTHER VEHICLES

9.7.1. Motor Vehicle tax, registration fees and ULB parking fee will be waived for all other electric vehicles that are eligible for FAME India demand incentives. This waiver will apply for the period of this policy i.e. 2019 - 2023.

10. CHARGING INFRASTRUCTURE

Experience in other cities across the globe indicates that availability of charging infrastructure is a key driver of EV adoption. The objective of this policy will be to create an enabling environment for the provision of private as well as public charging infrastructure.

Setting up of Public Charging Stations (PCS) shall be a de-licensed activity and any individual/entity is free to set up public charging stations, provided that, such stations meet the technical as well as performance standards and protocols laid down below as well as any further norms/standards/specifications laid down by Ministry of Power and Central Electricity Authority from time to time.

Any person seeking to set up a Public Charging Station may apply for electric connectivity and shall be provided connectivity on priority by the Distribution Company (DISCOM) licensee to supply power in the area.

10.1. TYPES OF CHARGING STATIONS

CHARGING STATION TYPE	VEHICLE CATEGORY	LOCATION APPLICABILITY
Small Charging Stations	2-Wheelers & 3-Wheelers	City
Medium Charging Stations	2-Wheelers, 3-Wheelers & Cars	City & Highways
Large Charging Stations	2-Wheelers, 3-Wheelers, Cars & Heavy Duty Vehicles	City & Highways

Standard layout of public charging station as per the above mentioned category shall be provided by the Madhya Pradesh Urban Development and Housing Department

10.2. MINIMUM REQUIREMENTS FOR PUBLIC CHARGING STATION (PCS) ON GOVERNMENT AND PRIVATE LAND

10.2.1. Every Large and Medium Public Charging Station (PCS) shall have the following minimum infrastructure as prescribed in the Guidelines and Standards notified by Ministry of Power, dated 14 December 2018 for "Charging Infrastructure for EVs".

10.2.2. 33/11 KV line/cables with associated equipment including as needed for line termination/metering etc. and in case of medium charging station with less charging load LT connections can be used.

10.2.3. Current international standards that are prevalent and used by most vehicle manufacturers internationally are Combined Charging System (CCS) and CHArge de MOve (CHaDeMO). Hence, Public Charging Stations shall have, one or more electric kiosk/boards with installation of all the charger models as follows:

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Charger Type	Charger Connectors*	Rated Output Voltage (V)	No. of Connector guns (CG)	Charging vehicle type (W=wheeler)
Fast	CCS (min 50 kW)	200-750 or higher	1 CG	4W
	CHAdeMO (min 50 kW)	200-500 or higher	1 CG	4W
	Type-2 AC (min 22 kW)	380-415	1 CG	4W, 3W, 2W
Slow/Moderate	Bharat DC-001 (15 kW)	48	1 CG	4W, 3W, 2W
	Bharat DC-001 (15 kW)	72 or higher	1 CG	4W
	Bharat AC-001 (10 kW)	230	3 CG of 3.3 kW each	4W, 3W, 2W

*In addition, any other fast/slow/moderate charger as per approved DST/BIS standards whenever notified.
Note: Type-2 AC (min 22kW) is capable of charging e-2W/3W with the provision of an adapter.

10.2.4. The Public Charging Station Providers are free to create Charging Hubs and to install additional number of Kiosk/Chargers in addition to the minimum number of chargers prescribed above along with battery swapping facility.

10.2.5. Share charging station data with DISCOM and to maintain appropriate protocols as prescribed by DISCOM for this purpose. The UDHD shall have access to this database.

10.2.6. Appropriate public amenities like cafeteria, public toilets and outdoor media devices etc shall be allowed only on medium and large public charging stations on highways. Under Municipal control area only public toilets and outdoor media devices shall be allowed on public charging stations.

10.2.7. Public Charging Station must have Standalone battery swapping facilities in addition to the above mandatory facilities, provided space/other conditions permit.

10.2.8. The guidelines for the minimum chargers/charging infrastructure for vehicles at each category (small, medium and large) of charging stations shall be separately issued by UDHD.

10.3. PRIVATE CHARGING POINTS (PCP) NON COMMERCIAL

10.3.1. Private Charging Points meant for self-use of individual EV owners (non-commercial basis). The above minimum infrastructure requirements do not apply to Private Charging Points.

10.3.2. Captive charging infrastructure for 100% internal use for a company's own/leased fleet for its own use will not be required to install all type of chargers.

10.4. PROTECTION AND SAFETY REQUIREMENTS

10.4.1. Safety and protection for all category charging stations to be ensured for India specific environment (As per Automotive Industry Standard (AIS) 138 Part1, CEAR regulations) or any other guidelines, circulars, protocols, regulations and standards published by Government of India (GOI) and Government of Madhya Pradesh (GoMP).

10.5. FINANCIAL INCENTIVES FOR PUBLIC CHARGING STATIONS DEVELOPED ON GOVERNMENT AND PRIVATE LAND

The below mentioned incentives are over and above FAME incentives.

CHARGING STATION TYPE	VEHICLE CATEGORY
Small Charging Stations	On Chargers: Capital Subsidy of 25% of the value of the charging equipment/machinery for first 300 charging stations upto a Maximum subsidy of INR 1,50,000.
Medium Charging Stations	On Chargers: Capital Subsidy of 25% of the value of the charging equipment/machinery for first 100 stations upto a Maximum subsidy of INR 2,00,000.
Large Charging Stations	On Chargers: Capital Subsidy of 25% of the value of the charging equipment/machinery for first 100 stations upto a Maximum subsidy of INR 10,00,000.
*The above mentioned all category stations will be entitled to 25% subsidy or maximum subsidy amount whichever is less.	

10.6. PUBLIC CHARGING STATION ON GOVERNMENT LAND

The following steps will be followed to set a public charging and battery swapping network across Madhya Pradesh:

10.6.1. The location and lands will be identified by the authority for setting up of public charging station on government land. These public charging stations can be small, medium, large category charging stations. Energy Operators' (EOs) will be invited to bid to set up charging stations along with battery swapping facility at each of the identified location.

Since bids will be invited on PPP model hence on each location the charging stations can have cafeteria, use and pay public toilets and outdoor media devices for advertisements etc as per the financial viability of the project.

10.6.2. Necessary minimum government land to urban local bodies/transport companies for the identified locations for these charging stations and battery swapping stations shall be done currently as per the provisions of Clause 4(1) of the Revenue Book Circular. It would be appropriate for private individuals/companies to arrange for their own private land/private land to be purchased/taken on contract.

10.6.3. Charging stations along with battery swapping facility will be carved out from existing public parking zones, bus depots and terminals, and locations such that they offer easy entry and exit. Charging stations will also be set up at various bus depots and citizens can also use the charging stations by paying applicable tariff.

10.6.4 Energy Operators (EOs) will be granted fixed capital subsidy (VGF) “Financial Incentives For public Charging Stations developed on government and private land” for developing charging stations on government land.

10.6.5. Energy Operators (EOs) will be selected for each identified location based on competitive bidding on the basis of “Highest Rental” paid to Public Transport Special Purpose Vehicle (SPV) per charging station. “Rental Holiday” (rental holiday means no rent shall be charged to Energy Operators) shall be provided to Energy Operators for an initial period of Three (3) years out of total authorisation period as decided by SPV.

10.6.6. The Energy Operators (EOs) may choose to add more charging spots (with public access) in addition to the ones demarcated by city SPV’s but will be granted only the maximum subsidy amount as mentioned in the “Vehicle Category” column in the table below clause 10.5.

10.6.7. Revenue from appropriate public amenities installed at charging stations like cafeteria, public toilets and outdoor media devices etc, will be collected by the Energy Operators (EOs).

10.6.8. The Energy Operators (EOs) will be expected to accept payments through multiple modes (credit/debit cards, mobile wallets, UPI etc.).

10.6.9. All the Charging Stations data will be linked to a mobile application which will display upto date/ real time data of the Charging Stations like location of nearest Charging Stations, number of available charging slots and number of charged batteries available at the Charging Stations of the user’s choice.

10.7. FAVOURABLE ELECTRICITY TARIFF FOR ENERGY OPERATORS (EOS) AND BATTERY SWAPPING OPERATORS (BSOS)

10.7.1. For implementation of technical as well as performance standards and protocols from time to time laid down by Ministry of Power and Central Electricity Authority, the State Nodal Agency will be Madhya Pradesh Power Management Company.

10.7.2. The tariff charged by DISCOM to Public Charging Station (PCS) will be determined by the Electricity commission on behalf of the GoMP to fix the tariff limits in lower applicable spectrum.

10.7.3. The tariff applicable for domestic consumption shall be applicable for domestic charging.

10.7.4. For the charging of EV the State Nodal Agency (Madhya Pradesh Power Management Company) shall fix the upper ceiling of the Service Charges to be charged by the Public Charging Stations. This shall be determined by taking a certain percentage of the tariff charged by DISCOM to the Public Charging Stations.

10.7.5. Electricity tariff applicable for Battery Swapping Operators (BSOs) and Energy Operators (EOs) will be as notified in the regulator as being applicable for “Charging Stations for e-rickshaws/e-vehicle on single point delivery”. GoMP will endeavour to maintain the existing special electricity tariff for EV charging at the same rate or lower for the entire duration of this policy.

10.7.6. Variable pricing for Battery Electric Vehicle (BEVs) will be considered in terms of peak hours and non-peak hours.

10.7.7. Energy Operators (EOs) and Battery Swapping Operators (BSOs) who have won a concession to operate will be encouraged to use low cost and renewable sources of power. In consultation with electricity regulator, GoMP will look to provide:

- a) Open Access with the condition of having contract demand of 1MW and above at every charging station or swapping kiosk; so long as cumulative demand for the Energy Operators (EOs) or Battery Swapping Operators (BSOs) is more than 1MW.
- b) Net Metering — Energy Operators (EOs) and Battery Swapping Operators (BSOs) who set up captive renewable energy facilities will be given net metering facilities with the regulatory commission operating in Madhya Pradesh. This will encourage generation and use of renewable power.

10.7.8. Regulatory commission will issue regulations, defining tariff and related terms & conditions, for Vehicle To Grid (V2G) sale of power to meet the requirements of real time

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and ancillary services for DISCOM. Sale of power from battery swapping stations to the grid will also be considered as V2G sale of power.

10.7.9. Third party EV charging infrastructure providers will be allowed to procure power from DISCOM at regulator determined tariff and will be allowed to provide the charging service to EVs.

10.7.10. Third party EV charging service providers will be allowed to procure power through open access route from renewable energy sources irrespective of the size of the demand. Regulator will determine the appropriate process and charges related to open access.

10.7.11. Third party EV charging service providers can also setup their own renewable energy generating stations at their premises for charging EVs only.

10.7.12. Cloud charging features will be encouraged in order to have all metering and transactions done digitally with payment apps, Near field communication (NFC) enabled devices, radio frequency identification (RFID) tags etc. while keeping it flexible and customer friendly.

10.8. CITY & BUILDING CODES

10.8.1. City codes will be modified for both public places and private buildings in order to make the infrastructural changes needed for charging/battery swapping infrastructure.

10.8.2. Urban local bodies, Municipality rules/regulations will be modified to allow charging and battery swapping stations to be setup within its limits as and when required.

10.9. QUALITY AND STANDARDS

10.9.1. Standards for charging equipment will also be created in close association with the central government departments and scientific bodies.

10.9.2. The state will follow the charging specifications as per the guidelines issued by Department of Heavy Industries, GOI.

10.10. DATABASE OF PUBLIC EV CHARGING STATIONS

10.10.1. Madhya Pradesh Urban Development And Housing Department (UDHD) shall create and maintain online database of all the Public Charging Stations through DISCOM. Appropriate protocols shall be notified by DISCOM for this purpose which shall be manda-

torily complied by the Public Charging Stations/Battery Charging Stations. This database shall have restricted access as finalised between UDHD and DISCOM.

10.11. PAYMENT INFRASTRUCTURE AND INFORMATION SHARING

10.11.1. Energy Operators (EOs), Battery Swapping Operators (BSOs) will be expected to accept payments by multiple modes (e.g., cash, cards, mobile wallets, UPI); payments through the common mobility card payment system will also need to be offered as an option for payments.

10.11.2. An open, publicly owned database will be developed by UDHD offering users up to date and real time information on Public Charging Infrastructure (i.e. location, number and type of swapping kiosks/chargers, queue lengths/availability and pricing). Energy Operators (EOs), Battery Swapping Operators (BSOs) will have to provide data to this public database. The database can be used free of charge by in-vehicle navigations systems and charging apps and maps.

11. OTHER INITIATIVES FOR DEVELOPMENT OF CHARGING INFRASTRUCTURE

11.1. INVESTMENT BY THE GOVERNMENT DEPARTMENTS

11.1.1. The DISCOM will invest in setting up both slow and fast charging networks in government buildings and other public places. These charging points will be accessible to both government as well as private vehicles.

11.1.2. DISCOM will setup the charging infrastructure on its own or through third party operators using appropriate PPP models. Such costs can be recovered as part of ARR.

11.1.3. Inter State Bus Terminals (ISBT), bus terminals and bus stops will have charging stations.

11.1.4. Municipal Corporations Public parking spaces will be mandated to have charging stations.

11.1.5. Government buildings will set a roadmap to setup charging or swapping stations in all of its parking spaces.

11.1.6. Charging infrastructure will be installed at least every 50 km on highways, other major roads etc.

11.2. INITIATIVES FACILITATING INVESTMENTS FROM PRIVATE INFRASTRUCTURE DEVELOPERS

11.2.1. Land across major cities will be allocated for private developers for setting up charging or battery swapping stations in a form similar to a contemporary fuel station as per statutory clearances.

11.2.2. Facilities will be provided to setup swapping stations in the form of a kiosk to service, 2 wheelers and 3 wheelers.

11.2.3. Existing private buildings such as malls and other commercial buildings will be incentivised to setup charging/battery swapping stations.

11.2.4. All new permits for commercial complexes, housing societies and residential townships with a built-up area 5,000 sq.mt and above will mandatorily have a charging stations.

11.2.5. DISCOM shall release supply to charging/battery swapping stations within 48 hours of application.

11.2.6. Municipal Corporations / Municipalities shall issue provisional permissions online immediately to setup charging/battery swapping stations. Any verification shall only be post sanction of provisional permission.

12. DEMAND CREATION

12.1. TARGETS OF THE GOVERNMENT OF MADHYA PRADESH

12.1.1. 2020-21 shall be announced as the “Year of the Electric Mobility” in Madhya Pradesh.

12.1.2. The cities of Bhopal, Indore, Jabalpur, Gwalior and Ujjain will be declared as model EM cities with phase-wise goals to adopt EVs and charging infrastructure and new EV enabling building codes.

12.1.3. Target to convert 100% of public transport bus fleet into electric buses (Battery Electric Vehicles) by 2028, with the first phase of 100% conversion of bus fleet in top 5 cities by 2026.

12.1.4. All forms of Government vehicles, including vehicles under Government Corporations, Boards and Government Ambulances etc. will be converted to electric vehicles by 2028.

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12.1.5. Target to convert 100% of all commercial & logistics fleets to electric fleet by 2028. These fleets can belong to any government organisation, Public Transport Special Purpose Vehicle (SPVs), educational institutes, hospitals or corporates and other institutions.

12.1.6. Phase out all fossil fuel based commercial fleets and logistics vehicles in all cities by 2030.

12.1.7. Smart Cities in the state will also include and design projects to support for charging infrastructure stations. Identified areas will be designated as “E-Zones” with entry only to non-fossil fuel based vehicles.

12.1.8. These cities will develop specific goals of charging infrastructure density within a defined timeline linked to target for deployment of EVs. These cities will create mobility blueprints and make provision in infrastructure needs to support the charging stations and EV only zones.

12.1.9. One or more of higher registration, renewal, parking fees, congestion charges, taxes/cess on sale, and limitation of entry into city limits etc. will be levied on sale/usage of highly polluting vehicles in order to support the switch to environmentally friendly vehicles.

12.1.10. Multiple government offices and public areas will be chosen for installing public charging equipment that can be used by all.

12.1.11. GoMP will support CSR initiatives in the Electric mobility ecosystem, as per the guidelines of GOI.

12.1.12. PPP models in public transport, using purely EVs, will be offered based on selected routes/EV Zones (eZones).

12.2. PROMOTING USAGE OF APP BASED E-AUTOS AND E-CABS

12.2.1. Increased use of e-cabs and e-autos will have a positive impact on air pollution. With a view to promote the use of these vehicles, the following measures will be adopted for a period three years from the date of notification of this policy:

12.2.2. App-based aggregators and ride hailing service providers who provide mobility solutions will be invited to participate in the “App-based e-cab/e-auto user incentive scheme”. App-based aggregators who participate will need to aggregate a fleet of e-autos and/or e-cabs and offer rides in these vehicles.

12.3. COMMUNICATION

12.3.1. The government notices that communication to create awareness amongst people is very crucial to further the growth of electric vehicle.

12.3.2. Test rides in collaboration with various vehicle manufacturers, green days in the capital region and other cities will be promoted to take the new technology to the common man.

13. RECYCLING ECOSYSTEM – BATTERY AND EVS

- (i) EV batteries typically need to be replaced once they have degraded to operating at 70-80% of their capacities. EVs are therefore going to outlive the batteries powering them, with a vehicle requiring about two batteries in a 10-year life span.
- (ii) Batteries that have reached their end of life will need to be either reused or recycled. Lack of adequate reuse or recycling will have a high environmental cost. Not only do EV batteries carry a risk of giving off toxic gases if damaged during disposal, but core materials such as lithium and cobalt are finite and very expensive to extract.
- (iii) The Madhya Pradesh Electric Vehicle (EV) Policy 2019 will encourage the re-use of EV batteries that have reached the end of their life and setting up of recycling businesses in collaboration with battery and EV manufacturers that focus on 'Urban Mining' of rare materials within the battery for re-use by battery manufacturers.

13.1. REUSE OF EV BATTERIES

13.1.1. Energy Operators (EOs) and Battery Swapping Operators (BSOs) will operate as end of life battery recycling agencies. EV owners can deposit vehicle batteries that have reached their end of life at any charging point or swapping station operated by an Energy Operators (EOs) or Battery Swapping Operators (BSOs) and in return get a remunerative price for this battery. Disposal of EV batteries in any other manner – e.g., in landfills or as scrap, will not be allowed.

13.1.2. A nodal agency shall be appointed by GoMP to act as an aggregator to facilitate and monitor sale and purchase of EV batteries that are at least 70% of rated capacity. These batteries will be purchased from Energy Operators (EOs) and Battery Swapping Operators (BSOs) and will then be re-used as 'power banks' to store renewable energy.

13.2. END-OF-LIFE BATTERY AND EV RECYCLING

13.2.1. EV batteries that cannot be re-used, either because of poor condition of the battery or lack of demand for reuse, will be sent to recycling facilities. At these recycling facilities, high value battery materials (e.g., Nickel and Cobalt) will be recovered and then sold to battery manufacturers for re-use.

13.2.2. GoMP will invite battery recycling businesses to establish a presence in Madhya Pradesh. Appropriate protocols and investment subsidies for setting up such a business shall be notified by GoMP after consultation with stakeholders, especially battery and EV manufacturers. Battery recycling businesses will purchase end of life batteries from Energy Operators (EOs) and Battery Swapping Operators (BSOs) as per mutually agreed prices.

14. MANUFACTURING

To promote the manufacturing of EV and its components in Madhya Pradesh, the GoMP shall provide the marginally increased incentives including land concessions and FAR relaxation with respect to the incentives that are already been sanctioned under Industrial Promotion Policy 2010 as applicable with amendments to EV manufacturing units, as the case may be. The EV manufacturing units shall be eligible for R&D grants including subsidy on stipend for research scholars who do quality research in electric mobility and its components, patent registration and quality certification as per Madhya Pradesh Industrial Promotion Policy 2010 as applicable with amendments.

15. RESEARCH & INNOVATION ORIENTED INDUSTRIAL DEVELOPMENT

GoMP shall encourage research and innovation oriented development in the domain of Electric vehicles. Madhya Pradesh wants to be the hub not only for manufacturing of EV but also for R&D focusing on next generation of battery management systems, drivetrain components, battery chemistries, fuel cell systems and intelligent transportation systems. The EV manufacturing units shall be eligible for R&D grants as per Madhya Pradesh Industrial Promotion Policy 2010 as applicable with amendments.

15.1. TESTING AND QUALITY CONTROL LABS

15.1.1. In coordination with National automotive testing and R&D Infrastructure (NATRiP), GoMP shall strive to set-up quality testing centre for EVs.

15.1.2. These facilities would be accessible to all manufacturers in the sector.

15.2. SKILL DEVELOPMENT INITIATIVES

15.2.1. State will identify 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, technical institutes will be prepared to introduce EV courses & train technicians and engineers.

16. CREATING JOBS – VOCATIONAL TRAINING AND R&D

A large number of new jobs can be created due to increasing EV adoption – e.g., e- auto and e-cab drivers, charging station operators and EV service mechanics. Madhya Pradesh has the opportunity to become a hub for the provision of training related to jobs in the EV eco-system. Following policy measures will be taken to train personnel for the EV eco-system:

16.1. In partnership with auto Original Equipment Manufacturers (OEMs), Energy Operators (EOs) and Battery Swapping Operators (BSOs), vocational courses will be designed to train EV mechanics and charging station staff. These courses will be delivered through the Skill Centres (SCs) set up through PPP (public private partnerships) with OEMs by the GoMP.

16.2. Private Sector Partners – i.e., auto OEMs, EOs and BSOs will be allowed to conduct their own captive staff training at the skill centres (SCs).

16.3. The Government of Madhya Pradesh ('GoMP') will conduct regular recruitment 'fairs' at the SCs for private sector recruiters who would like to hire trained personnel.

16.4. SCs will also offer short re-training courses for ICE mechanics who would like to be trained in repairing and servicing EVs. These part time courses will be offered through the year at concessional fees.

16.5. High levels of EV penetration and availability of charging infrastructure will offer an opportunity to design and test new models of electric mobility and charging equipment. A

Centre of Excellence focused on design and use of EVs will be funded by the Government of Madhya Pradesh ('GoMP') and set up at one of the Central or State universities within Madhya Pradesh. This Centre will focus on improving usage and efficiency of EVs and charging equipment.

17. POLICY IMPLEMENTATION

17.1. 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 2019. Following measures shall be taken to ensure a smooth implementation of various proposals in Madhya Pradesh Electric Vehicle (EV) Policy 2019.

17.2. A State Electric Mobility Board (Madhya Pradesh Electric Mobility Board "MPEMB") shall be constituted as the apex body for effective implementation of the Madhya Pradesh Electric Vehicle (EV) Policy 2019. It will be chaired by the Hon'ble Minister of Urban Development, Government of Madhya Pradesh ('GoMP'), and comprise of the following members:

- (i) Principal Secretary (Urban Development and Housing Department)
- (ii) Principal Secretary (Power)
- (iii) Principal Secretary (Finance)
- (iv) Principal Secretary (Industry)
- (v) Principal Secretary (Technical Education & Skill Development & Employment)
- (vi) Principal Secretary (Transport)
- (vii) Commissioner (Urban Development and Housing Department)
- (viii) Commissioner (Transport) – Member Secretary
- (ix) Upto 5 experts from Industry, Academia and Civil society to be nominated by Hon'ble Minister of Urban Development, GoMP

17.3. The Madhya Pradesh Electric Mobility Board (MPEMB) will be fully empowered to sanction the expenditure of funds collected under the various incentive schemes and projects emanating out of the Madhya Pradesh Electric Vehicle (EV) Policy 2019. The Board will meet at least once every three months and will perform the following roles:

- (i) Review the implementation and effectiveness of the policy and undertake necessary and sufficient corrective measures / changes / amendments if required to achieve the goals desired under the policy
- (ii) Put in place the institutional mechanisms required to implement this policy (e.g., notifying list of approved vehicles, identifying public charging and battery swapping locations etc.)
- (iii) Bring about inter-departmental coordination in respect of matters related to this Policy.
- (iv) Review the definitions of EV, EV components, Battery and Charging Station or any other related definitions and approve the amendments as may be appropriate.
- (v) Review the best practices
- (vi) Recommend the formation of sub-committees or special task forces on priority areas from time to time.

17.4. The Government of Madhya Pradesh ('GoMP') is committed to providing stability in the EV policy framework in the state of Madhya Pradesh. The Madhya Pradesh Electric Mobility Board (MPEMB) will be fully empowered to make any changes in the level of incentives or subsidies or to take measures for effective targeting of such subsidies such that the primary objective of this policy i.e. to drive rapid adoption of Battery Electric Vehicles (BEVs) in a manner where they contribute to 25% of all new vehicle registrations by 2026, is achieved.

18. FUNDING

Under this policy the additional income will be generated from the mentioned sources like Outdoor Advertisement License Fee (as per the provision of Madhya Pradesh Outdoor Advertisement Media Rules 2017), Parking Surcharge on ICE Vehicles at Urban Local Body (ULBs) run parkings and Electric Mobility Bonds by ULBs for which appropriate action shall be taken by UDHD.

19. OPERATIONAL GUIDELINES

19.1. Operating Guidelines for this policy will be issued separately.