

Recommendations for the Kerala e-Mobility Policy

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1. Introduction

Kerala has a high vehicle population of over more than 10 million vehicles on the road. These vehicles roughly benefit 20 percent of the total population of Kerala, the rest 80 percent depend upon public transport and shared mobility systems. Catering to all these demands, the state has reached a point where the pollution is on the rise and global warming poses a negative impact on the state.

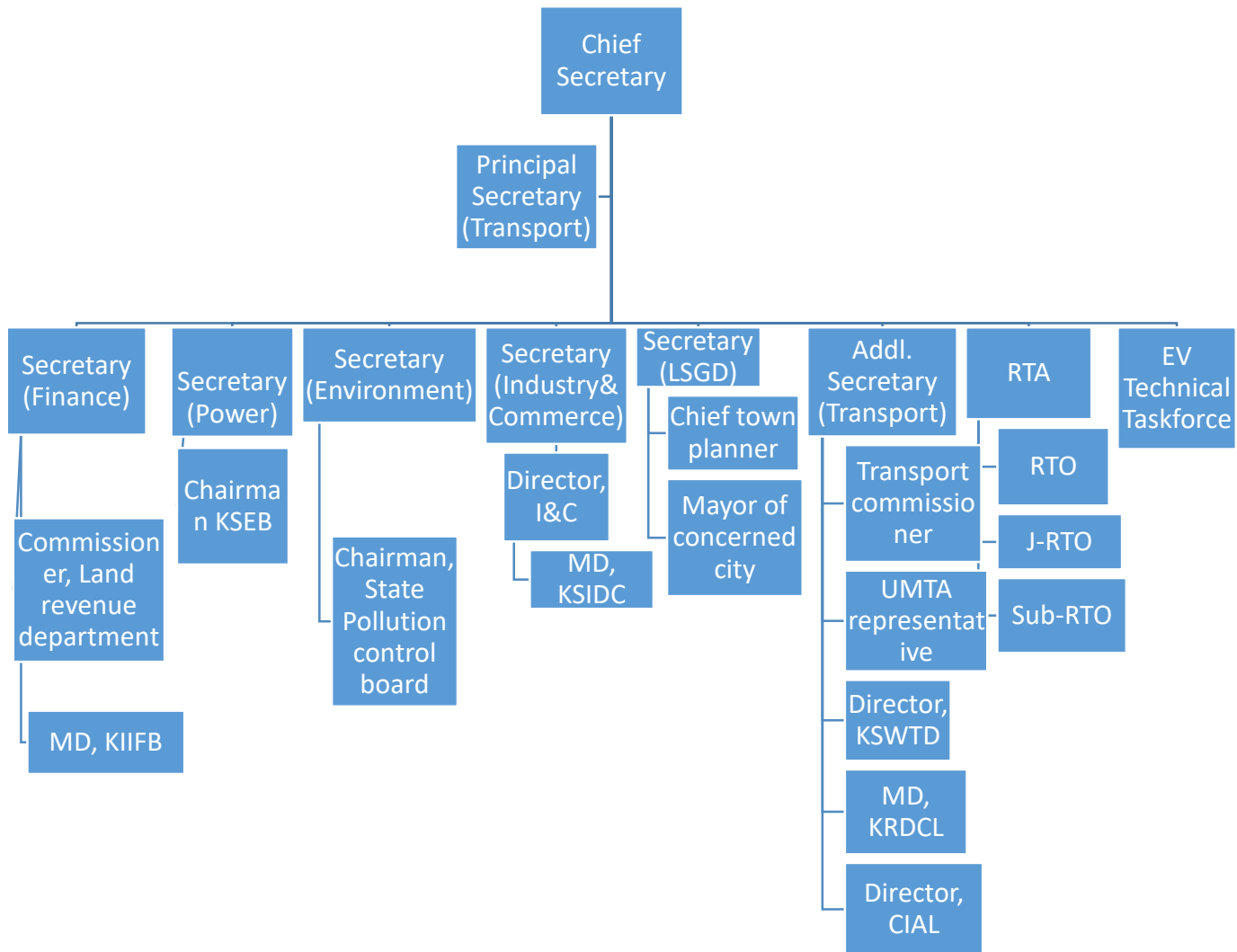
According to the Air Quality Index, Kochi, Thiruvananthapuram, and Thrissur are the three districts where the air quality has shifted from an index of good to moderate as on June 2019. The pollution and accidents on roads have increased because of the increase in the number of vehicles and there is a real need to tackle the situation.

As a result, the government of Kerala introduced Electric Vehicles (EVs). EVs promise fewer emissions, noise, and support shared mobility system. The number of vehicles on the road is expected to get reduced with the introduction of modern shared transport systems like Electric Buses and e-Auto rickshaws. They will provide a comfortable and fatigue-free ride, with no polluting gases, and much reduced vibration and noise. This will attract vehicle owners to move to shared mobility. Calicut, Kochi, and Thiruvananthapuram are selected as pilot cities because of their connectivity and geographical position. The strategic positioning of these cities gives an advantage to implement the policy in a way that it reaches more people and connects to them with ease.

This report is drafted in consultation with industry and government experts along with secondary data inputs.

2. Constituting Committee

The e-mobility policy has not constituted a committee responsible for its implementation and monitoring. A constituting committee suitable for the implementation of the policy is mentioned below:



The EV technical taskforce contains representatives from KAL (40percent), Private Manufacturers (30percent) and Agents & Dealers (30percent). The director of CIAL will play an advisory role on the board. KIIFB is an independent statutory body that is stationed under a finance secretary for easy coordination and cooperation. Since the RTA comes under the Transport Commissioner, the commissioner is the head advisor of RTA while working under the Additional secretary of transport.

3. Institutional arrangement

The policy has not mentioned the institutional arrangement, the below-mentioned institutions are considered to be the primary stakeholders in the policy.

- a. **E-Mobility state-level taskforce** – as suggested in the EV policy.
- b. **KMRL** – KMRL takes the first initiative in introducing a fleet of electric buses, auto, rickshaws and other public transport for its achieving its objective of a seamlessly integrated system with a common time table, ticketing and centralized command control. KMRL will also assist the state in acquiring land to set up charging stations within city limits and for setting up manufacturing units outside the city limits.
- c. **Unified Metropolitan Transport Authority (UMTA)** – UMTA is headed by the Managing Director of KMRL. The main objective of UMTA is to assist the state and KMRL with the seamlessly integrated system with common ticketing and the above-mentioned systems. UMTA representative can guide the state with the recommendation and implementation of the EV policy.
- d. **Kerala Transport Development Finance Corporation** – The main objects as per the Memorandum of Association of the Company are the financing of transport vehicles, workshops, and machinery, financial arrangements for acquisition of transport vehicles and machinery, assist transport or other undertakings, agencies, firms, whether incorporated or not, situated within the State of Kerala, with long, medium or short terms loans for any purpose whatsoever or subscribe to their share capital, equity or preference debentures or assist in other ways within the restrictions imposed by Reserve Bank of India from time to time. In addition to its usual lending schemes to KSRTC and others, the Company widened its scope of activities by undertaking BOT/BOOT projects for KSRTC and Government departments.
- e. **Motor Vehicles Department** - Motor Vehicles Department established by the Government of Kerala to carry into effect the provisions made under the Motor Vehicles Act 1988, considering the development and changes in the Road Transport Technology, Pattern of passenger and freight movements, development of road networks in the state and particularly the improved

techniques in the motor vehicles management and they also use a software-Smart Move to conduct its other activities of taxes, licenses, etc.

- f. **Kerala Rail Development Corporation Limited (KRDCL)** - the director of KRDCL is welcome as an advisor to the board for the implementation and progress of the EV policy. The department can also help us with the required land acquisition for this specific project.
- g. **State Water Transport Department** – the director of the department is welcome as an advisor to the board and can help with the introduction of the electric boats and regulating traffic in the inland waterways and setting up charging stations by finding suitable spots for acquiring.
- h. **Kerala Infrastructure Investment Fund Board** - The main intention of the Fund was to provide investment for critical and large infrastructure projects in the State of Kerala. This also includes major land acquisition needs of the State. KIIFB has recourse to the advanced financial instruments approved by SEBI and RBI and is expecting the upspring of sustainable infrastructure development of the State.
- i. **Kerala State Industrial Development Corporation** - one-stop-shop for any investment in Kerala and the single point contact for investors setting up shop in the state. KSIDC offers a comprehensive set of services encompassing support in developing business ideas and viable projects, assistance in conducting feasibility studies, providing various financial products tailor-made for different types of investments, handholding and facilitation from project conceptualization to commissioning, providing developed Infrastructure facilities and guidance for implementation. A nodal agency for foreign and domestic investments in Kerala, KSIDC facilitates clearances, approvals, and processes various incentive schemes for starting new business ventures. KSIDC acts as a spokesman of the State spreading its industrial ethos besides being an interface between the Government and the Industry.
- j. **KSEB** – KSEB will carry out the duties and roles mentioned in the Kerala EV policy and should ensure uninterrupted power supply to manufacturers especially during business hours.
- k. **State Pollution control board** – the state pollution control board should formulate the guidelines the industry and manufacturers need to follow and can

set up a proper disposal mechanism for used lithium batteries and phased-out vehicles.

- l. GCDA** – Since Kochi is selected as one of the pilot cities for implementing the policy, GCDA can help the LSGD in implementing the policy by providing the necessary services and guiding them on the street level.
- m. Land Revenue Department** - The land revenue department possesses authority over all government-owned lands and administers it. Most of the government lands are often issued free lease or for nominal amounts and they can help the state in providing the required amount of land for implementing the policy.

4. Public Transport

4.1 Subsidies and Incentives

Total subsidy budget for Swapping and charging stations mentioned in the policy is Rs.15, 09, 00,000. The total budget for early adoption scheme is Rs. 30,000 for three-wheelers, state tax breaks, road tax breaks, free permits for fleet drivers. Electricity Tariff budget is 75 percent of actual price during off-peak hours and 150 percent of actual price during peak hours. (GoK, 2018). Apart from the incentives mentioned in the draft policy, there is a need to introduce certain incentives such as:

- a. 100 percent of the stamp duty incurred by the industry for purchase or lease of land, buildings, sheds, etc. shall be reimbursed for the first agreement signed subsequent agreements are not eligible for reimbursement. (GoAP, 2018).
- b. The policy could also include an option for providing low-priced charging at the public charging stations for the initial years of introduction of the policy and also an exemption from paying tolls (for the initial 2 years) and parking fees (for the initial 2 years). (GoAP, 2018).
- c. Existing Internal Combustion Engine (ICE) two-wheeler owners will get a scrapping and de-registration incentive of up to Rs.20,000 per vehicle for scrapping two-wheelers that are not BS [VI] certified. This incentive will be applicable for up to two years from the date of notification of this policy. Taxis, who de-register and scrap vehicles that are more than seven years old should also surrender their permits. (GNCTD, 2018).
- d. For all e-cab/e-auto rides taken through an App-based aggregator, the state will offer 'cashback' rebates for short distance - first and last-mile connectivity trips. These rebates will be capped at a maximum of 20 percent of the trip cost and an absolute value of Rs. 15 per ride. The objective of the rebate will be to make an e-cab/e-auto ride at

least 10-20 percent cheaper than an equivalent ride in an ICE cab/auto. (GNCTD, 2018).

One way to determine the eligibility for providing subsidies to vehicles would be to consider the running time, distance travelled and emission produced in 24 hours. The state should aim to replace the vehicles with the maximum factors mentioned above so that traffic becomes efficient in the city. (Wilson, 2019).

4.2 Shared Mobility

The current scenario in Kerala is at a condition where only 20 percent of the population are benefitted from having a private vehicle. In a four-member household, if one member uses the private vehicle, the other three members will have to depend on public transport to get about. It is imperative to correct the basic concept and ideology of mobility to ensure smooth operations around the state.

The idea of shared mobility is an important aspect and has been one of the focal points in every EV policy. Both public and private transports are encouraged to be a part of the shared mobility idea, carpooling and e-autos are two ways in which the private sector can be encouraged for shared mobility. The state should encourage corporate fleets for the shared mobility concept, where Electric buses can be used for corporate purposes. This measure will reduce the number of private cars on-road as well as bring down emissions. (GoKA, 2019). To implement and to enforce the usage of EV for corporate fleets, corporates should be directed to set aside a certain percentage of their CSR funds for acquiring EV busses for their fleets. The usage of the EV buses in the corporates will also ensure increased awareness among the employees. The corporates should ideally provide free charging and encourage their employees to adopt EVs by giving them a subsidy from their CSR funds

While considering the present scenario of public transport in Kochi, which is selected as a pilot city for the implementation of the E-Mobility policy, only 30 percent of the roads in Kochi are serviced by private and government bus operators. The spread of transport in Kochi is limited and not well connected. The situation is not better in other parts of Kerala as well. A careful analysis of the current demand of the public should be studied. To optimise the transport services in Kerala, re-routing the transport services would be ideal. Kochi is blessed

with three directional railways, 14 state waterways, and several highways. The state should make good use of the existing resources. The technology should be introduced to activate the non-functional infrastructure and to speed up the movement of automobiles. There are several Jetty's in Ernakulam district (around 50 Jettys), if it is possible to connect all these Jettys, the spread of the transport network will increase and can service lakhs of people and in turn reduce the concentration of people in a single mode of transport.

In Kochi, a season pass of the local train from Aluva to South Railway station costs Rs. 3 which is much cheaper than the Metro which charges around Rs. 50. Instead of extending the metro line and spending Rs. 6,000 crores, the state should upgrade the local train coaches and put new trains on this service line and maybe increase the fare to Rs. 10 from Rs.3, as the people can afford it these days and this will enable better maintenance of these trains. The technology should be used to better the existing system. The state can reduce the cost by bettering the system rather than introduce new mega-projects when the need is non-existent. The current metro line in Kochi serves less than 10 percent of the people daily. The local trains can provide a much better service and can attract more people. (Sohan, 2019).

For shared mobility to be a success, an important feature that needs to be achieved is the first mile and last-mile connectivity. In Kerala, people prefer private vehicles because of the lack of first and last-mile connectivity. The existing public transport system and its network should be made more elaborate and it should deeply penetrate the areas never reached before. Rather than expanding the metro in the already existing line, the state should create new perpendicular and parallel lines that give access to all parts of Kochi, which achieves first and last-mile connectivity.

In Kerala, the general population is unwilling to walk more than a kilometre, if they believe public transport cannot achieve last-mile connectivity under a kilometre, they prefer to use their vehicles. Another important factor to be considered to encourage public transport is to make it punctual, the vehicles should be precise and on-time. The timings given in the information system should be strictly followed and this will give the citizens the confidence to use the public transport system. The passenger information system is another important factor, to attract tourists and to help out of town citizens, the state should create a system where they can reach their desired locations using public transport. For it to be possible, there should be a connecting and feeder systems along with brochure cards explaining their travel information.

This brochure card should also include details of how to travel around the area. (Gopakumar, 2019).

Observing the trends and behaviour of the millennia, the purchase of new vehicles has considerably gone down in recent years thanks to ride-hailing apps like Uber and Ola. Encouraging these services to convert their fleet into EVs will help in achieving the goal of environmental protection and sustainability. Also during this period, it is advisable to start renting services, where people can rent out EVs for their personal use. The state should encourage private renting services like Zoomcar, Revv, etc. to convert their fleet to EVs. (Gopakumar, 2019).

5. Infrastructure

5.1 Types of Charging Station

While browsing through the EV policy of Kerala, there is a lack of clarity about the types of charging stations to be set up. There has been no mention of the different types of charging stations that can be set up. The four types of charging stations that can be installed are:

- a. Domestic User-Friendly (Individual)
- b. Public Charging Facility (Government facilities, Bus depots, railway stations, etc.)
- c. Common Charging Facility (Malls, Residential buildings, educational institutions, etc.)
- d. Commercial Charging Facility (Roadside, fuel stations, etc.) (GoMH, 2018).

The EV policy should mention what type of charging station to be installed. The rates charged at these charging stations should be uniform and at residential prices. Fast and Slow chargers will be set up according to the demand in the areas.

5.2 Conversion of existing fuel stations and setting up of new charging stations

A subsidised rate for the conversion of already existing fuel stations to electric charging stations should be encouraged. The oil companies should be encouraged to convert their company-owned fuel pumps and the agents who own independent fuel pumps should be encouraged as well. More share of the subsidies should be given to the independent agents (if possible). The conversion process should be free and the state should bear the cost. (GoMH, 2018). The state should give enough benefits and privileges to induce the private players into setting up of the charging stations, separate regulations and incentive package should be designed for new charging stations being set up outside the city limits.

Clarity should be provided on the swapping and charging station standards to maintain uniformity in the services provided, these guidelines should be enforced at the beginning, so that equality in services are maintained. (Wilson, 2019).

5.3 Phase Out should equal Phase-In

The phase-out process of the Internal combustion(IC) engine public transport need a target date and for the phasing out process the government should use measures like high taxes for new registration of IC engine vehicles, special forms, documents, and permissions for registration of new IC engine vehicles (similar to the Singapore model), non-renewal of vehicles older than 15 years, cess for pollution by IC engine vehicles, Parking surcharge for IC engine vehicles, Congestion fee from private vehicles which demotivates the buyers from purchasing new IC engine vehicles. (GNCTD, 2018).

The state should also keep in mind that, the phase-out process should also equal the phase-in process. The amount collected from the phase-out process should be invested in the phase-in process. They should impose a restriction for the entry of IC engine taxis, busses, and other public transport and shared transport inside city limits within the initial 3 years (should be in line with the centre's policy for making all commercial vehicles to be electrified by 2026) and 7 years for private transport. The state should simultaneously phase out police vehicles and other government department vehicles as well during the same period.

Currently, the e-mobility policy is aiming at introducing EVs on the road without simultaneously reducing the number of IC engine cars. There is a need to draft the policy in a manner that reduces the number of IC engines and increases EVs on the road. With the current policy, there is an addition of vehicles to the roads without replacement. The policy should be framed in a way to arrest the number of vehicles on the road. During this process, the number of private vehicles should be limited, and shared mobility should be promoted. (Mathew, 2019).

5.4 Creation of E-Mobility Zones

E-mobility zones should be created based on density, congestion level and impact of pollution, where the traffic is regulated and made exclusive for EVs. By zones, it means a larger area and not just tourist spots (like mentioned in the policy) which represent a particular small region. (Jose, 2019). This is where the role of entry restrictions come into play. A plan for the creation of e-mobility zone should be prepared where they create a corridor along the metro lines and should aim to concentrate all major commercial activities along this corridor and in this corridor, they should only allow the plying of EVs and should restrict the entry of

conventional engine public transport within 3 years of implementation of policy. (Mathew, 2019).

In the e-mobility zone created, an auto-rickshaw service where they move in a loop inside the mobility zone with multiple pick up zones should be created. A service station should be available at regular intervals to tend to emergencies related to the vehicles. To promote and encourage the auto-rickshaw drivers to be part of this initiative, they should be provided with a monthly fixed salary in the initial years to cover any losses (if) incurred. (Wilson, 2019).

5.5 Roads and other infrastructure

With the introduction of the EVs in Kerala, autonomous vehicles will also make their way into the state. The prime condition for autonomous vehicles to work in the current road scenario is not to have any pedestrians on the roads. At this very moment, the ability of autonomous vehicles to detect pedestrians is pretty weak. So to support the use of autonomous vehicles, the state should build better footpaths according to the international specifications and shouldn't compromise on this regulation.

In the year 2018, out of 4000 deaths due to road accidents, 40 percent of the deaths were pedestrian accidents, so the creation of better footpaths is a necessary condition in improving the transport system of the state. (Sohan, 2019). The state should make the roads pedestrian safe.

Man, Machine and Means are the three important aspects in designing and when designing the e-mobility policy, Road surface, lighting, and design of the roads are the three aspects to be considered and given importance. A proper design of these aspects will ensure an efficient and effective transport network. A mistake often made while designing mobility policies is the negligence of the pedestrian issues, the designers often fail to consider the issues of the pedestrian and fail to design a system where they are included in the planning. (Gopakumar, 2019).

The design should have a table top zebra crossing at junctions with foot traffic for the ease of pedestrian crossing and for the vehicles to respect the limits of the zebra crossing. At other junctions with lesser foot traffic, LED strips should be installed on the stop line which matches its colours with the Traffic signal, so that it encourages vehicle discipline at traffic signals. (Jose, 2019).

While implementing the policy, there is a need to concentrate on the car and two-wheeler users as they occupy the majority of the road. In Kerala, the two-wheeler population is more than any other mode of transportation. If the state plans to replace the existing vehicles of conventional engines, the replacement should start with two-wheelers. (Wilson, 2019). Converting two-wheeler to EVs has its benefits. Battery swapping technology is easier to follow in smaller vehicles and it is easier for people to afford. While planning for two-wheelers, there is a need to provide them with parking spaces. Spaces for two-wheeler parking should be a priority to avoid the parking of the vehicles on the road.

When the state provides the infrastructure at the pickup points of e-autos and e-busses, it is advisable to place plants/grass on the roof of these pickup point stations as they provide a cooling effect in the waiting station and also compensates for the concrete jungles being developed in the cities. Vertical gardens along the metro pillars and other infrastructure should be installed.

5.6 A new revenue model/source

As an opportunity for revenue returns to the state, the state can set up rest stops and motels around charging facilities near the highways. This gives long-distance travellers confidence and comfort. The inter-city and inter-state transport system should also make use of this. A common problem identified with inter-state bus operators is the high amounts of accidents because of a lack of rest. Logging machines should be installed at these rest stops and the drivers need to clock in a combined time of 2 hours in a day for resting while running these long route busses and other transport services. (Gopakumar, 2019).

Another revenue model which can be introduced here is the placement of advertisement screens on e-autos and busses. The recipient of the revenue generated should be the owner (Government, Institutions or Driver cum owner) of the vehicle. (Wilson, 2019).

5.7 Bus Priority Corridor

The state needs to create a bus priority corridor 3-4 meters wide on the left-hand side of the road, where other vehicles are not allowed to enter and illegal entry into these priority corridors should be penalised. These corridors are to have overhead electric lines for busses and CCTVs for ensuring that discipline is maintained in these corridors. This will help the busses in being punctual, reduce traffic congestions and curb the rash driving practices of

private bus operators. In these corridors, the bus pick up points should be designated strategically where the concentration of people is maximum and proper infrastructure should be provided at these pick up points. (Hari, 2019).

UMTA should be in charge of creating the bus priority corridor and e-mobility zones as they can plan and coordinate with the government and alter the state laws which will enable the creation of these corridors. (Hari, 2019).

6. Retrofit and Reuse

6.1 Retrofitting Electric kit to existing vehicles

The term retrofitting refers to the practice of adding new technologies to old systems and thereby making the old systems more efficient and therefore reducing technological wastes. In the scenario of the policy, retrofitting refers to the replacement of the IC engines with electric kits to already existing vehicles. This practice can reduce a lot of e-waste, resource exploitation and can reduce pollution. Retrofitting will also reduce the cost for private players and will encourage them to convert their IC cars to electric cars. The cost of the kits should be reasonable and attractive enough for the general public, it is desirable if these kits are universal and can be tailored to fit in the desired vehicles of choice. To reduce the cost of the kits, local manufacturers should be encouraged to produce the kits along with vehicles as well, a certain incentive shall be provided for the same. The state should give incentives for mining the metals from lithium-ion batteries which can be reused later.

6.2 Disposal Mechanisms and recycling

Lithium-ion batteries used in electric cars are very dangerous and polluting, hence they need to be dealt with care and should be disposed of in a way that doesn't lead to any long term harm for the environment. Cobalt, copper, lithium present in the batteries can be salvaged and reused in producing new batteries or other electronic equipment, hence there is a need to set up a plant that deals with the disposal and salvaging of damaged, worn out and replaced batteries. It is especially risky when Li-ion batteries are mistakenly put into a recycling bin and end up bouncing around in the back of a dry, recycling truck. Pressure or heat (in the summer months our trucks can get quite hot) can cause them to spark, setting off a chain reaction that spells disaster when that battery is in the back of a full recycling truck, surrounded by dry paper and cardboard. Lithium-Ion Batteries are one of the leading causes of recycling truck fires. Lithium-ion batteries are not suitable for the single-stream recycling process. Hence the state pollution control board should come out with guidelines for proper recycling of the batteries.

7. Awareness and Promotion

7.1 Auto Expo

As a part of the awareness program, Auto expos mentioned in the policy is a good initiative where local and foreign manufacturers can show off their products and also display their latest products and innovation. To make the expo interesting and to attract more foot traffic, the top EV manufacturers of the world like Tesla, Rimac, Mercedes Benz, GWM, MG should be invited. For the first 3 expos, foreign manufacturers should be given importance to attract investors, the general public and other manufacturers. In the subsequent years, the local manufacturers can be given the prime importance at these expos. (GoK, 2019).

7.2 Distinctive Appearances

For identification and awareness, the state should adopt different coloured number plates with the existing numbering system. Differential colouring helps the public and administrators of tolls and parking lots to identify EVs. The centre has approved for Green colour number plates for EVs with white numbering for private EVs and yellow numbering for commercial EVs. The state should change the appearance of the autos and driver uniforms to make it look attractive and eco-friendly. (Wilson, 2019).

7.3 Research and Development

The state should also promote research and development of EVs and related infrastructure, to promote this, the state shall provide research grants of up to Rs. 25 crores per annum to government-backed and private institutions.

7.4 Advertisements for awareness

The use of graphical illustrations and animations proves to be very efficient to get the information across. Radio, video ads, and other mediums that don't involve reading prove to be the most effective means to convey information. The employees of the transport department and other related organizations should be made aware of the policy and benefits so that they can convey it to the general public. (Wilson, 2019).

8. Privatisation of services

To improve the condition of the transport system in Kerala, the state could privatise the service to the extent where the private players operate and run the busses and swapping stations in the state by paying rent to the state government. The government could also outsource the maintenance of the busses and other vehicles and the bus stations to the private players. (Wilson, 2019).

The state needs to re-skill the existing old employees of the transport network to be able to use the modern technologies and features available in the latest vehicles, there is a need to make them technologically enabled. Features like Inward/Outward system, GPS, passenger information system are all considered liability operational logistics and therefore become inefficient. (Sohan, 2019).

9. Women Empowerment

To contribute towards empowering the women of the state, we should provide around 50 percent of the employment generated to women. They can be employed as bus/e-auto drivers, swapping/charging station personnel, etc. The state should promote women to take up more jobs as vehicle drivers as they are sober and less rash while driving. With the introduction of the bus priority corridor then women can easily handle the busses and are not under the pressure from their competition. (Paarel, 2019).

10. Technology

The technology to produce EVs and autonomous vehicles should be imported, the current technology and infrastructure available in Kerala are unsatisfactory. The state should create a platform where it is easier for foreign technologies to enter the state and set up their network or join hands with the existing network in the state. Producing vehicles that take up to 5 hours to charge to run 80 kilometres defeats the purpose because the people will be unwilling to own EVs with such long waits and low range. There is a need to get vehicles with a longer range and fewer charging time available in other countries or develop such technologies in the state as soon as possible to cater to the demand that will be created shortly.

The existing EV busses in India boast about placing their batteries under the chassis of the bus and thereby saving space and providing more occupancy capacity but a state like Kerala which is prone to floods will be at a disadvantage when acquiring these busses, at times Kerala experiences flooding on roads which raise the level of the water which can also damage the batteries located under the bus. We need to ask the manufacturers to move these batteries to the top or on the sides of these busses to avoid damage to the batteries due to water. (Sohan, 2019).

There are going to be many providers of EVs in the state by different manufacturers shortly. The state should aim to reduce the differences between the vehicles produced so that it becomes user-friendly and reduces wastage. After-sales services and parts availability are other issues faced while the introduction of new technology, the state should also foresee the requirement and meet the demand in advance for smooth and efficient operation. (Wilson, 2019).

The government should put more effort for technology sharing initiatives with foreign manufacturers, instead of setting up new factories, provide the foreign manufacturers a platform to produce their vehicles with the existing infrastructure of KAL and also update the infrastructure according to the need. This will also help in the larger goal of reducing pollution and preventing climate change. Fewer factories will result in fewer emissions.

The state also need to instruct the EV manufacturers to install fake noises in the vehicle when it travels at a speed less than 30 km/hrs, as it will alert the pedestrians and blind people that vehicles are approaching. This is an important feature because people in India depend upon

sound a lot and these fake noises generated by the vehicles to alert the pedestrians, as well as blind people, will be of great use.

11. Conclusion

The state considers the e-mobility policy of Kerala to be the solution for Kerala's mobility problems but in reality, it is a policy to help reduce pollution and limit the effects of global warming. The policy is also designed to help with Kerala's mobility problems as well, but the state needs another policy, a main policy where the aim is to solely solve the mobility problems of Kerala and the e-mobility policy should be a sub-policy of such a main policy. Introducing the e-mobility policy to tackle pollution and global warming will have little effect without a supporting policy that fights the same in other areas. If the state considers the total emissions, around 50-70 percent pollutants come from the factories while 30-40 percent comes from automobiles, so relying just on electrification will not fare in the fight against global warming.

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