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# A Skeleton Framework on Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) Scheme in India.

***[1]Dr Gayathiry D, [2]Ms. G. Ilakkia***

*[1]Assistant Professor, Sri Ramakrishna College of Arts & Science, Tamilnadu, India.*
*[2]Assistant Professor, Dr. N. G. P. Arts and Science College Coimbatore Tamilnadu, India*

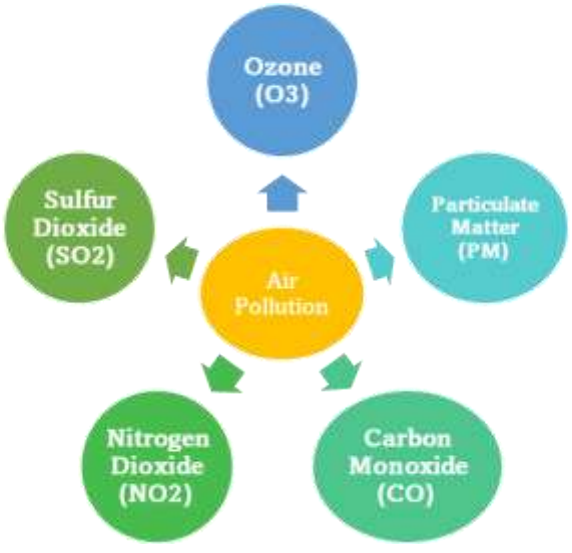
**A B S T R A C T**

Now a days, governments has initiate activity on developing their countries' in Electric Vehicles (EV) sector. They have planned for minimising the harm due to transportation sector that cause to human health as well as the environment. The manufacture and promotion of hybrid and electric vehicles (EVs) are revolution in the transportation sector. This paper provides the information about the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) scheme implement by the Ministry of Heavy Industries and Objectives, Features, Eligibility, Benefits of the scheme. They result in fuel savings, improved air quality, and reduced noise pollution.

**Keywords:** Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME), Electric Vehicles (EV), Eligibility and Benefits.

## Introduction

Air Pollution is the main environmental cause of disease and premature death in the world. As per the report three times more deaths than AIDS, tuberculosis, and malaria combined. Air Pollution is killing an estimate of 9 million premature death which fifteen times more than all the wars and many other forms of violence in total (Lancet Commission on Pollution and Health). The following points are the key pollutants that makes air pollution as dangerous as it has become in the last few decades.

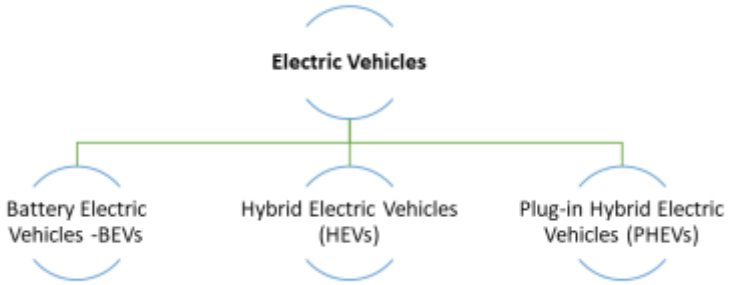



Air pollution in India is a solemn environmental issue and its lead to the premature deaths of two million Indians every year. Of the thirty most polluted cities in the world, twenty one cities were in India in 2019 (IQAir AirVisual's).As per a study based on 2016 data, (Indian Express) at least 140 million people in India breathe air that is 10 times or more over the **World Health Organization** safe limit and 13 of the world's 20 cities with the highest annual levels of air pollution are in India.

- 51% of the pollution is caused by industrial pollution,
- 27 % by vehicles,

- 17% by crop burning and
- 5% by other sources.

India is facing some serious air pollution issues since a decade and it is increasing at an alarming rate. The main cause of this exponential increase in the pollution levels is poor fuel quality, old vehicles, inadequate maintenance, congested traffic, poor road condition and old automotive technologies and traffic management system. In order to minimize the air pollution, Electric Vehicle (EV) can act as blessing in lowering the GHG emission. Emissions come from vehicles and industry, whereas in rural areas, much of the pollution stems from biomass burning for cooking and keeping warm. The Indian government has intention of having "only electric vehicles" on the road by 2030. It also encouraging the sale of hybrid and electric vehicles in the process. The Indian government initiate several 'perks' as part of this initiative, including an additional income tax deduction for interest paid on loans used to purchase Battery Electric Vehicles. These vehicles are more energy efficient, emitting fewer greenhouse gases (GHGs) and producing less noise. The following are the different types of electric vehicles:




## Benefits of Battery Electric Vehicles

- Lower running and maintenance costs
- Tax and financial benefits
- Better performance
- Zero tailpipe emissions
- Easy to drive and quiet and convenience of charging at home
- No fuel, no emissions

## Electric vehicle procurement rate in India

Electric vehicle industry has shown an extreme change, over the last decade. A lot of new trends, an innovative and efficient number of models, the rapid build-up of charging infrastructure, tax-saving schemes, and incentives attract quite a lot of consumers [44,45]. Furthermore, EV plays a vital role in the Indian market by reducing the dependency on fossil fuels and making a remarkable change in GHG emissions. Among 28 states and 8 union territories, for a total of 36 entities of India, Uttar Pradesh has the highest EVs sales with 16% followed by Karnataka at 13%, Maharashtra at 11%, Gujarat at 10%, Tamil Nadu at 8%, Rajasthan with 7%, New Delhi with 5%, Kerala with 5%, Assam with 4%, Bihar with 4%, Haryana with 3%, Odisha with 3%, and rest of states all together 11%(Electric mobility dashboard)

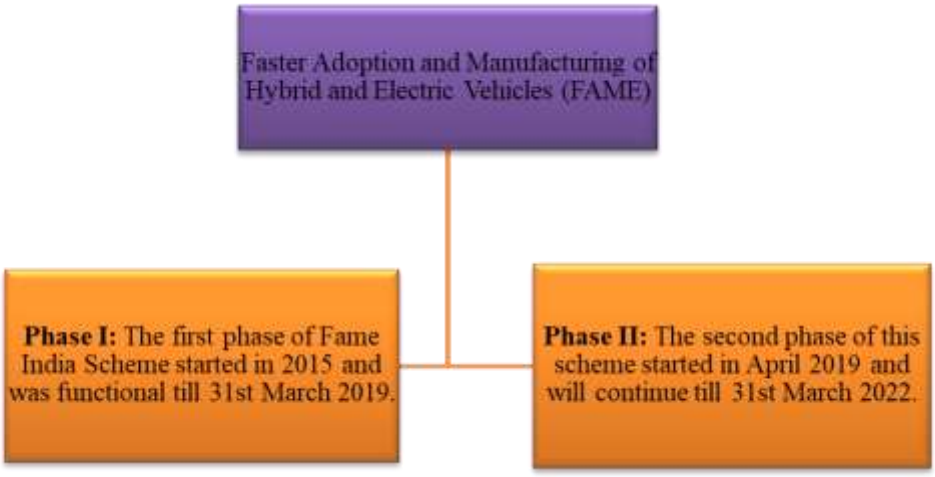

**Electric vehicle segment sales in India in H1 FY 2021.**

## Tamil Nadu

Now a days, Tamilnadu has dedicated to enticing investment and creating a comprehensive Electric vehicle Ecosystem in the state over the next ten years. Its proposals address a wide range of aspects, including promotion of innovation, creating an environment for industry and research, component manufacturing and skill building, ensuring adequate supply of power and charging points with favourable tariff, and safe handling, re-use and recycling of batteries.The Tamil Nadu government will offer an 'EV special manufacturing package' to units engaged in manufacture of EVs, its components, batteries, and charging infrastructure. The package includes the following incentives:

- SGST paid on sale of EVs will be reimbursed to manufacturing units.
- Capital subsidy of 15% will be given to units making intermediate products for EVs and charging infrastructure; capital subsidy of 20 % will be provided to battery making units.
- An additional 20 % capital subsidy to micro, small and medium enterprise (MSME) units and 6 percent interest subvention to medium industries will be provided.
- Manufacturing units will be provided 100% exemption on electricity tax and stamp duty, and 15% subsidy on cost of land.

Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME), is a scheme launched by the Government of India to give a enhancement of Electric Vehicles. This is important considering the efforts to combat climate change across the globe. The Government of India has allocated a budget of Rs 10,000 crores for the second phase of this scheme. This scheme was launched to achieve the goals of National Electric Mobility Mission Plan (NEMMP). (iea.org).Fame India Scheme operates in two phases.




## Objectives of Fame India Scheme

- This scheme encourages electric vehicle manufacturers and related providers to manufacture a higher number of electric vehicles in the country.
- Its goal is to reduce vehicular emissions and air pollution levels within the country.
- This scheme also aims to establish an electric charging infrastructure.
- In addition, Fame India Scheme targets to convert 30% of total transportation into electric vehicles by the year 2030.

## Benefits of Fame India Scheme

- Issues related to environmental and fuel conservation will be significantly reduced.
- Vehicles from different segments will receive subsidy benefits accordingly.
- Citizens can avail themselves of eco-friendly public transportation.
- This scheme will allow individuals to reap the benefits of renewable energy sources through charging systems.
- The establishment of charging stations in close proximity further encourages individuals to opt for electric vehicles.

## Conclusion

Even though the positive initiatives are taken by Indian government to promote various utility prospects that BEVs would serve, unfortunately, there still seems to be resistance to BEV adoption. All said and done, the EV industry in India is presently at a very nascent stage. However, if the current projected growth rate is something to go by, India is on its way to becoming one of the leading EV markets, worldwide. This fact is further strengthened by the Government's committed and consistent efforts in the recent years, to increase the adoption of e-mobility across market segments, through various demand and supply incentives as well as through dedicated EV policies at the national and state levels.

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