JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue

JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Motivations and incentives for the automotive industry to go green

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Abstract : Environmentalism and the automobile industry have been intertwined over the last several decades, as shown by the literature study. One of the primary motivations cited in the literature study for the automotive industry's interest in sustainability is the growing trend toward "green" consumption. Some of these other primary reasons why the automobile industry spends so much money on research, development, and innovation will also be discussed below**.** "The role of policies implemented by governmental agencies, as well as some information about how and why the automotive industry has had its good share of greenwashing scandals, are also discussed. Finally, an overview of the relevance of renewable energy and electric vehicles will also be provided.

Keywords: automotive industry; public incentives; fiscal policies; carbon dependability; green energy reliability; public interventions; alternative fuel vehicles; battery electric vehicles.

Introduction : In the last several years, the pace of our lives has been shattered by climate change. As a result of the dramatic upheavals, we've already seen devastating floods, the disappearance of coral reefs, glaciers melting, and an increase in global temperatures. The earth is being more degraded as a result of human activity. The looming environmental disaster isn't far away, given the tremendous shifts and recurring catastrophes. According to a research by the Health Effects Institute and the Institute for Health Metric, around 6.65 million people dieeach year as a result of air pollution.

The industries are stepping up output in order to keep up with the rising demand for their products. They're not aware of the enormous quantities of poisonous gases that are emitted into the air every time a manufacturing cycle is completed. Internal combustion engines (ICEs) have been clogging up our planet's landscape for the better part of the previous decade (ICE).

As a result, these forms of transportation generate toxic carbon dioxide and other pollutants into our atmosphere. This has been a long-overlooked problem, but it has now become the primary source of air pollution. Obesity, high cholesterol, and starvation remain the top three killers in the United States, but air pollution has now surpassed them as the fourth leading causeof death.

When it comes to air pollution in India, the country is in a precarious position. With 83.2 PM2.5 concentrations, India is the most polluted country in the world. Air pollution from ICE automobiles, coal-fired power stations, industrial discharges, etc. is a major problem in the nation. People around the nation are dying as a consequence of air pollution-induced heart andrespiratory problems.

- The automotive industry is in a unique position to lead the way in implementing environmentally friendly practises since it is such an important part of the economy. The increasing use of battery-powered electronic mobility in India is a key development in the business. Creating a sustainable environment removes the most significant climate change obstacles. India became a participant in the 2015 Paris Climate Summit,which aims to limit global warming below 2°C.
- Automotive manufacturers are refocusing on electric vehicles in response to growing environmental awareness. Because ICE cars produce so much hazardous pollution, this is the only method of cutting down on it. This will help India achieve its goal of being a carbon-neutral country. With the move from ICEV to electric mobility, fossil fuels will be depleted less, reducing climate change's consequences.
- The government has launched the National Electric Mobility Mission as part of an attempt to improve India's green efforts (NEMM). It will allow the country to produce more than 6-7 million electric cars. Government agencies may work together to obtain indigenous manufacturing, infrastructure, and technology capabilities via the plan's facilitation of cooperation.
- A growing number of stakeholders are working together to create electric vehicles thatare both high-quality and low-cost in India. When it comes to electric vehicles, the nation is always looking for new and better ways to suit its needs. Electric car finance and sales are still a problem. Fortunately, India's Rs 26,000 crore PLI (Production- Linked Incentive) programme is helping potential manufacturers overcome this obstacle. Electric and hydrogen fuel cell cars with cutting-edge technological components are eligible for incentives under this programme. As a result of this, electric-vehicle production is steadily speeding up.
- Lithium cell batteries are essential for the production of electric cars. The electric car sector may profit from $ 4.6 billion in government-declared incentives, mainly for battery producers, if the shortfall of Li-batteries is eliminated. Electric cars will become more widely available, while manufacturing costs will be reduced as a consequence.

One-stop shop for information on electric vehicles: the launch of e-AMRIT

As part of COP26, India unveiled e-AMRIT, which would serve as a one-stop shop for all information on electric cars, at https://e-amrit.niti.gov.in/. Concerns such as charging station locations and finance alternatives, as well as information regarding investment possibilities, government rules, and financial incentives are all addressed in this comprehensive guide to electric vehicle adoption and purchase.

The current electric vehicle (EV) infrastructure in India and the potential for future investment. Despite India's lofty goals, the country's electric vehicle industry is still in its infancy. But if you look at it from a different angle, India is the world's biggest untapped market for two- wheelers, particularly in rural areas. Under the automatic approach, 100 percent foreign directinvestment is permitted in this industry.

There has been recent movement to revise India's FAME II programme to make electric two- wheelers more affordable, showing that the federal government places a high value on the transition to clean transportation. As of November 25, 2021, over 1,65,000 electric cars have been supported by a demand incentive of roughly INR 5.64 billion (US$75.16 million) under the second phase of the FAME initiative. In addition, under the programme, 6,315 electric buses, 2,877 EV charging stations totaling INR 5 billion (US$66.63 million), and 1,576 EV charging stations totaling INR 1.08 billion (US$14.39 million) have been approved in 68 citiesacross 25 states/Union Territories.

For this reason, a number of production-related incentives schemes have been put in place to encourage broader use of electric mobility. Developing indigenous supply chains for important technology, goods, and auto components is one way to attain this goal.

Incentives based on production

It was in May 2021 that the government launched a Manufacturing-Linked Incentive Scheme (PLI) for ACC Battery Storage Manufacturing, which would encourage local production of such batteries and minimise import dependency. This will help the EV business by providing the necessary infrastructure and, as a result, will down the price of EVs dramatically.

Conclusion : For the car and drone sector in September 2021, the government authorised a PLI Scheme to encourage high value advanced automotive technology vehicles and goods, including 'green automotive manufacturing,' to be developed and manufactured All segments of battery electric and hydrogen fuel cell cars are eligible for the Champion OEM Incentive Scheme".

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