

TOPIC OF THE WEEK

APR'19 (11 to 17 Apr)

An Idea Whose Time Has Come

One of the foremost steps for the beginning of a sustainable lifestyle model for us is to conserve fuel. If we reduce the use of fossil fuels, our carbon footprint will also decrease thus leading to a healthier future for us as well as our future generations. To conserve fuel, you have to start with making a sustainable lifestyle with lesser fuel usage. We have to depend more on renewable resources than non-renewable resources. We need to choose for fuel alternatives that are eco-friendly. Lesser use of carbon emitting domestic products like air conditioners and fuel consuming vehicles should be avoided or at least minimized in usage. This way, you can conserve the natural fuels and help nature replace it in time. Excessive use and burning of fuels as well as their inefficient use cause pollution and global warming. Our Earth's natural reserves will be emptied faster and Earth's ecological system balance will be tampered with. Also, government spends a lot of money for

subsidizing fuel to the people. Fuel saved is money saved at national level.

Fossil fuels are harmful for the environment and the main reason behind it is the fossil fuels cause so much damage is due to the amount of carbon dioxide or CO₂ emitted when fossil fuels are burned. This burning and release of CO₂ is a huge contributor to the greenhouse effect and climate change. More CO₂ in our atmosphere causes less sunlight to escape back into space, causing the planet to warm.

When fossil fuels are burned, CO₂ isn't the only gas released. Other harmful gases such as nitrogen and sulfur oxides. Burning fossil fuels causes air pollution - smog, acid rain and etc. Even the drilling and mining for coal, natural gas, and oil all involve disrupting the natural landscape to access these materials. Drilling can disrupt the water table and if spills or accidents occur, we can have incidents like the Deep water Horizon Spill.

In the 19th and 20th, century electricity was one of the preferred ways to power an automobile. At that time an electric powered automobile was chosen over a fuel powered automobile, because electric powered automobiles were much easier to handle and much cheaper and easier in maintenance. But Electric car had to face lot of troubles and disappeared almost for a time being. There are a number of reasons to explain the decrease of popularity. The invention of the automatic starter, the growing market of cheap fuel, the mass production and easier and faster fuelling. Soon, the fuel powered cars – using the latest Internal Combustion Engines – had more advantages than the electric car. Only after decades the electric car was reintroduced when General Motors produced their first electric car. Unfortunately it also lasted for short time period. Car companies and oil companies started to defend themselves against the change the electric car tried to achieve. Oil companies saw their market slowly fade and car companies feared losing much of their sales. The resistance was extraordinary, even the government was

involved trying to stop a successful reintroduction of the electric car.

Finally today we are aware and has accepted the importance of using electric car for the benefit of our environment. People again experienced the advantages of an electric car. People realized they saved lots of money on their fuel costs and produced much less pollution by driving electric cars. Electric cars produce zero emissions, so they don't contribute to air pollution at all. Besides air pollution, they also make no sound, so they don't contribute to noise pollution either.

Once tweeted by Elon MUSK " Tesla is here to stay and keep fighting for the electric car revolution."

From the very beginning, the company, Tesla, positioned itself as the first serial manufacturer of electric vehicles and its founders dreamed to free the customers from oil burden. Musk significantly supported such aspirations. Musk categorically stated that in twenty years, more

than half of produced vehicles would be electric ones. He was even ready to bet on that as well as many others. Yet even the most optimistic analysts' estimates state that Musk's forecast cannot be realized. Elon Musk believes that the world has become dependent on oil. This dependence leads to climate change and permanent geopolitical tensions. A refusal of internal combustion engines in favor of electric motors can make a difference. He is planning to cover the US, Europe, and Asia with the network of Supercharger stations. As of April 04, 2016, there are 613 Supercharger stations with 3,628 Superchargers in the world. Elon Musk was fascinated by the opportunity of colonizing Mars and created Mars Oasis. The goal of the project was to create automated greenhouses, which in the future could have become a basis for a self-sustaining ecosystem. The main problem was an enormous delivery cost of greenhouses. The root of the problem he saw in the bureaucratization of the space industry, the small competitiveness of large corporations and their lobbying efforts to prevent the entry of new players.

Electric vehicles make a lot of sense in India as six Indian cities are declared by the World Health Organization (WHO) to be the most polluted cities in the world. Electric vehicles will not only be cheaper to operate but at the same time will also save our environment. A survey also shows that Electric Vehicles are ideal for India as around 75% of Indians travel less than 1000 kilometers in a month in cars. The technological requirements of electric vehicles are complex. The main unit is a battery that would power the electric motor. Production of these batteries on a large scale is no easy task. They also need a continuous supply of electricity along with charging infrastructure. They cannot roll out electric vehicles without installing charging stations at regular intervals first. In a recent conference, the road transport Minister Nitin Gadkari ordered automakers to focus its resources on producing and developing electric vehicles only. The government wants its roads to be filled by electric vehicles only by 2030. The Union Budget 2018 has allocated \$40.5M towards the development of electric and hybrid vehicles.

Another area where India needs to work hard is in the manufacturing of these Vehicles in India. They need to invest in manufacturing of both batteries and the surrounding infrastructure required for a smooth shift to electric. If they do not invest in this area then they might be the victim of Chinese products and cars taking over the market just like mobile handsets. This is one of the most important areas the government needs to figure out before they can force consumers to switch to electric. The government also has to take steps to install charging points and stations with multiple points for these Electric Vehicles. This is a big task and requires serious funding and work. Without the installation of these stations, consumers will not be confident while investing in an electric vehicle as they will have to worry about charging. The government has to come up with a solution by which they could not only maximize the number of stations they can install but also reduce the costs. They also have to change their focus from non-renewable sources of energy such as fossil fuels for this electricity to renewable sources of energy such as wind

and solar. Currently, India is heavily dependent on coal and other fossil fuels for energy.

Another important aspect is the safety of the car. Considering most of the Indian states record high temperatures during summer, it will be a task for automakers and battery manufacturers to build the mass-market high performing and long-lasting lithium-ion batteries. Not just at manufacturing level but also coming together with firefighters who will deal with such fires and many other concerned stakeholders at the time of planning as car safety is going to play a crucial role for India to meet its electrification.

However, we hope that very soon we will be enjoying the latest technology and definitely by finding out the proper solutions for the loopholes. At first, the cost of owning an electric vehicle will definitely be high and thus does not sound appealing to most Indian consumers. But slowly when more and more people shift to electric, it will be cheaper, cleaner and highly sustainable.

For reference:-

- <https://www.theguardian.com/environment/2017/dec/01/electric-cars-already-cheaper-to-own-and-run-than-petrol-or-diesel-study>
- <https://www.ukessays.com/essays/business/example-essay-on-emerging-market-of-electric-cars-business-essay.php>
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Additional Readings:

- <https://www.theguardian.com/commentisfree/2019/mar/15/the-guardian-view-on-language-the-flesh-made-word>
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