# Electric Car: Benefits And Drawback Of Electric Vehicle

Electric vehicles had renowned history background with creative creation, copy right pattern and idealistic aim against the steamed power vehicles. At that time electric vehicles had a very competitive market against the very well-recognized steam-engines vehicles which was very fast and have internal combustion engines, so the designers of the electric vehicles have to strove their brain to make vehicles less polluting , adequate ranges and elegant for the monitoring publics. Since 1920s electric vehicles were part of the interest for the people due to the environment crisis and fuel shortages. As a result electric vehicles have balanced edge on the markets (1). The approval for the electric vehicles in Australia is very slow and rather then increasing it goes on decreasing. In 2016 Australia only sold 0.02% of new electric car which was lower than the 2013( The conversation 2017). Despite electric vehicles have some drawbacks, the advantages has outweigh those demerits. This essay will debate the two disadvantages, namely smart charging station and inadequate range as well as its celerity. Despite with negative effect it has positive aspect like eco-friendly and used electricity instead of fuel will also be presented.

Firstly, electric vehicle is “car for tomorrow” green, clean and keen. Green represent as eco-friendly. Keen is due to its high technology and clean for low global emission or zero emission (10). As per the Australia Government calculates Queensland’s greenhouse gas emissions (GHG), the total gas emission was 532.9 Mtco2 in 2016 which contributed more emission other than other state of Australia total of 28.7%. while 14.7% is contribute from the transports and 48.1% from the stationary energy (11). In 2008, road transport was the main source of co2 emission which accounting for 69.2 million tones (ABS 12). However, according to the Gaines et.al 2007 reported that 40g/km emission will produced by renewable energy. Behavioral change will not enough to reduce the emission but high technology play pivotal role to control the harmful gases. Vehicles like electric scooter, motorcycle, electric bicycles, as well as electric vehicles. The major merits about the recent technology has low emission rate and can be drive with renewable energy source as well as minimal rate then other conventional sources (3). For examples, king(2007)13 discovered that UK select the best category of vehicles to reduce the co2 emission with minimum of 25 per cent. A same analysis done by Greenwheels (2008)14 gas emission reduce by 20-25 per cent which is lower that the 222g/km in 2010 for the new vehicles, which is recommended by the Federal chamber.

Another significant impact of the electric vehicles use renewable energy are like wind, photovoltaics(PV) and biomass energy. As per the Australian National Electricity Market analysis Australia are using 90 per cent of renewable energy which were mostly produced by solar energy and air energy. And rest of the energy were gain by biomass and hydroelectricity. Electricity were provided all over the Australia, so that car can be easily charged on their garage over night for the next day, which is low cost then petrol or diesel car. In 1999 ABS reported that almost 85 percent Australian people charge their own vehicles in their home almost overnight so they can start day with a full charged batteries. As we know electricity are renewable can gradually replace the fossil fuels (Shinnar R., 2003) 15. For instance, in 2025 Denmark will have 150 million Euro/ year cost benefit by electricity vehicles 16.

On the other hand Australia lack quality of smart charging center and its distributions. The main

drawbacks of EVs takes longer recharging time contrast with fuel vehicles. The rate of charging depends on the battery capacity and distance travelled. For instance, in America it takes six hours to charge the vehicles having 120 volts with 40 miles range. However with the cars having 240 volts batteries will charged in three hours. Charging power is directly proportionally to the vehicles ranges. Increasing in the range will demand high power of electric supplies. But every home doesn't have facility with the high power electricity public services. And other issue is the distribution of the power at shopping center, work, parking stations (16). If we can distributed power in residential buildings and office parking lots and make few charging station with smart station with battery swapping stations (17). Which make peoples journey more efficient.

Apart from distribution and charging station, another demerits of electric cars has limited ranges and speed with contrast to fossils vehicles. However its EVs ranges depend upon charges, battery capacity, weight of the vehicles, terrain and type of driving behaviors. The average distance fall under 60 km – 160 km depending upon the various factors. Different manufacture companies were busy on developing the capacities of the battery which ca exceed beyond the 160 km .For examples, Nissan Leaf has the capacity of storing 40 Kwh power and can travel up to 230 km in a single charge. Also there are other vehicle that can travel more that Nissan Leaf. Tesla Model S Long have the capacity of 100 Kwh and can travelled up to 623 km in a single charge in super charger power (3).

To sum up, electric vehicles have more benefits like ecofriendly, and operates with the renewable fuels which outweigh the disadvantages like charging station and short trips. With high technology and proficiency EVs taking huge markets in Australia along with poor status of public vehicles which influence Australian toward the private owned cars (4). If we over come the problems that we are facing with the electric vehicles. There is no doubt that EVs market will skied in near future.