Drawbacks and overcome Techniques on Electrical vehicles

A.Ram Sainath[1] P.Nanda Vardhan Reddy [2] P.Sai Deepak[3]

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Author Emails
sainath.sunny543@gmail.com
nandupedavalli@gmail.com
saideepak1234deepak@gmail.com

ABSTRACT:

The Electrical Vehicle (EV) is a relatively new concept in the world of the automotive industry. Although some companies have based their entire model of cars around being proactive and using electricity, some also offer hybrid vehicles that work off both electricity and gas. An electric car such as Nissan Leaf, Ford Focus Electric or Tesla Model S, Chevrolet Volt is a great way for you to not only save money but also help contribute towards a healthy and stable environment. The **drawbacks o**f **an** electrical vehicle are finding a Charging station - EV charging stations are fewer and further between than gas stations, charging takes longer, the driving range on a full charge, Higher Initial Purchase Cost, Replacing the Batteries is Expensive. The **Overcome Techniques** on Drawbacks of Electrical vehicles are Range and Charging Speed, Performance and life time, Establishing E V charging stations for every 50 KM, Taking Subsidies from government at purchasing time.

INTRODUCTION:

An EV is a shortened acronym for an electric vehicle.EVs are vehicles that are either partialy or fully powered on electric Power. Electric Vehicles have low Running costs as they have lessMoving parts for maintaining and alsoVery environmentally friendly as they use little or no fossil fuels (petrol or diesel)

Fig: Manufacturing of Electrical Vehicle

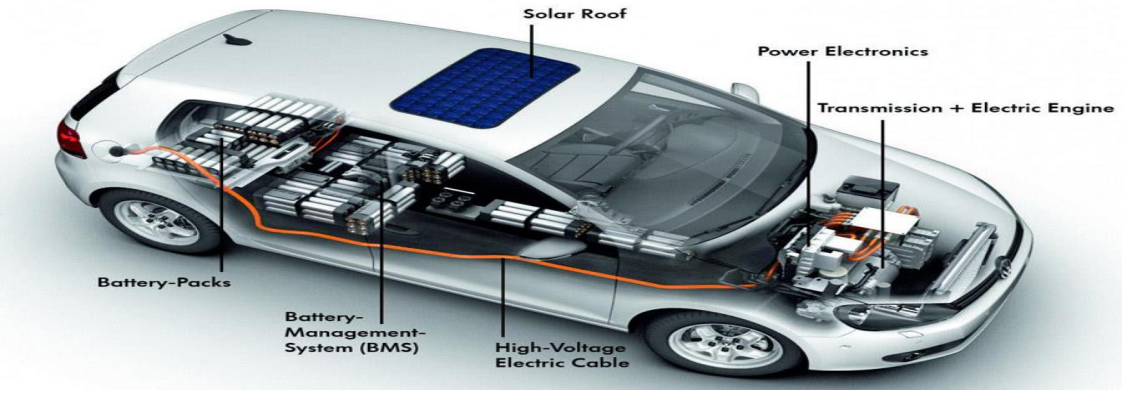

Fig: Electrical Vehicles

The disadvantages of EVs:

- Finding a Charging station - EV charging stations are fewer and further between than gas stations.
- Charging takes longer.
- The driving range on a full charge.
- Higher Initial Purchase Cost.

Replacing the Batteries is Expensive

1. Perceived cost:

While it's true that EVs often have a slightly higher price tag for the same sized model in an internal combustion engine (ICE) car, they can close that gap when it comes to running costs. EVs can cost the equivalent of paying 30c/L of fuel to run, and their lack of moving parts means they're much cheaper to service. Purchase prices are dropping every month, there is more choice coming to market, and many EV models are very competitively priced.

The best way to overcome this barrier of perceived cost is to fight it with data. Present decision-makers with a business use case for EVs using total-cost-of-ownership (TCO) information on purchase price and running costs.

Compare this with a more typical petrol/diesel vehicle and let them draw their own conclusions. Sometimes if you make people feel as though something was their idea, they're more likely to go for it!

2. Range anxiety:

Range anxiety is a psychologically driven fear that an EV will run out of charge and leave you stranded. It can come from a misunderstanding of just how far EVs can travel and how they operate. While range of early EVs was limited, today's EVs can offer ranges equal to a full tank in their ICE equivalents.

Again, range anxiety can be combated with data. Many fleet vehicles only travel short distances around a town or city and are perfectly suited to an EV range. In New Zealand, over 90% of daily vehicle travel is 90km or less, well within the range of an EV. It can help to remind the team that they'll still have the option of driving an ICE vehicle if it's really required for extra-long driving distance.

3. Driver education:

Once a driver gets behind the wheel of an EV, they're often shocked to discover just how similar it is to driving an ICE. Until they can test-drive a vehicle, you'll encounter resistance from people who believe additional driving skills are required. In fact, the reactions is more often one of delight at the more fun and engaging driving experience with the new technology in EVs, like regenerative braking and optimal power driving.

Three ways to overcome this are to get drivers and stakeholders behind the wheel as soon as possible by organising test-drives with your dealer, implementing a defensive driving training program to show drivers

you're considering their fears and upskilling them, and getting EV champions on board to help change the company culture around EVs and their benefits.

4. Learn about EV performance and fit-for-purpose:

You need an expert in your corner who can help you choose the right EV for your company. That's where we come in. We can help you get your fleet sorted with the best EVs for your needs and your budget.

There are already EV options with great power and performance for the majority of New Zealand fleet requirements, and for the more specific need, new models are on the way. For example, a common objection we hear is that there is no EV for load carrying and more heavy-duty work. This is true – for now. But global automakers have options coming soon.

As a fleet manager, you'll need to directly address these sorts of objections and barriers if you want to successfully adopt EVs in your business. If you can do this, you'll gain all the advantages EVs have to offer your fleet.

4. Charging speed:

The biggest deterrent to making an EV buying decision is the driving range it promises and more than that, it is the fact that reloading the electric car's battery to full takes much more time than filling up the fuel tank with fossil fuel. Most EVs around the world use lithium-ion battery packs which evolve a bit every year but we're still to see a revolutionary tech in the field. Now though, there is a word from the Penn State University where engineers have developed a battery that can provide enough charge to drive an EV 320-480 km after a charge of only 10 minutes.

Charging an EV even at a superfast 'supercharger' station would take up to 50 minutes to fully charge the battery pack. But a new battery developed in the US promises otherwise.

computers running any one of a number of operating systems. To ensure that readers of your article can display and print it correctly, it is important for your article's PDF file to be truly *portable*: Your PDF file needs to be fully "self-contained."

Establishing EV Charge Stations:

Government Guidelines for Setting EV Charging Stations

The Government of India has made it compulsory to set up an EV charging station every 3 kms in the cities, 25 kms on the highway, and 100 kms on highways for heavy-duty vehicles.

Now some private companies also establishing EV charging stations like Hundai,KIA,etc.

Fig: EV Charging Station

CONCLUSION

THERE IS A POLLUTION AND HEAVY DIESEL AND PETROL RATES , SO FUTURE IS ELECTRICAL VEHICLES

Fig: Representing Future of Vehicles

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REFERENCES

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