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Senator Storer
Chair of the Senate Select Committee on Electric Vehicles

30th July 2018

Dear Senator Storer,

Thank you for the opportunity to contribute to this important discussion around electric vehicle adoption in Australia.
The South Australia Branch of the Australian Electric Vehicle Association (AEVA) is very active in promoting electric vehicle adoption. Recently we hosted a Green Drive Day where over 400 people were able to experience test driving or riding an electric car, scooter or e-bike. The message we received was that people are keen to purchase an electric vehicle (EV), but there are barriers to that adoption. Listed below are some of the initiatives that we see that would break down these barriers.

1. SA Power cost

In South Australia, there is concern that power costs are high, and increasing the number of electric cars on the road would put extra stain on the network.
In the majority of situations, people travel around 30km per day. This is well within the range of current and next generation of EVs. In most cases, people will charge their vehicles at home. In SA you have the capacity to source your energy for recharging though an off peak controlled load or J Tariff. By utilising this option, you not only purchase power at a lower rate, but you are not taking power at a time when the demand is higher, so there is a need to educate people to ensure that future EV owners use this preferred window. This we feel, would reduce the demand on the existing network and would essentially take up existing spare capacity within the network.
We feel a good education/awareness program would achieve this behaviour shift.

We also feel there should be a program to encourage the link between owning an EV and home production of power and battery storage. A suitably sized solar system, linked to a battery bank would go a long way to having EV owners independent of the grid.

Again, an education/awareness program may be needed and also make sure the cost of any meter upgrade if required is minimised

2. Employers providing charging facilities for employees

As stated, the majority of charging of electric vehicles will occur at the home. In most cases people will be able to commute to work and back home, but for many people, 'range anxiety' is a concern, and having a charging facility at work, removes that concern. It has been shown that providing this facility increases the uptake of EVs.

www.greencarreports.com/news/1086326_electric-car-charging-at-work-the-next-big-push

With our rapid uptake of rooftop solar, on most days there is a peak in production around the middle of the day. This is at odds where demand tends to peak in the morning as people get up and get ready for the day and then again at the end of the day when people return home and are preparing their evening meal etc. Encouraging charging at work, during the day, assists in smoothing out the spike, and takes pressure off other times of the day, where there may be high demand.

We see this as a benefit provided to employees, similar to providing free or sheltered parking. It would also be an opportunity for a business to demonstrate in a practical way their commitment to environmental issues.

3. A fast charging network between Adelaide and Melbourne

There is currently a network of Tesla superchargers between Adelaide and Melbourne. This network is only accessible to Tesla vehicles.

There is a need to provide a network of DC fast chargers, available to all makes of electric vehicles.

Currently it could take a number of days to travel between Adelaide and Melbourne and destinations in between, relying on negotiating with local business, for example caravan parks or country showgrounds, to access facilities.

The next generation of EVs have a range up to 300 kms plus for city/local driving, but less at highway speeds. We would recommend that the fast chargers be spaced no more than 150kms apart. It also helps with addressing driver fatigue, allows drivers to stop and have a 20 minute break while the vehicle charges to 80 % capacity.

Having this network in place, you can then access other networks on the eastern coast. For example, NRMA are installing a network of fast chargers throughout NSW, and the QLD government are installing a network from Coolangatta to Cairns.

To add to the functionality of the network we would also recommend including level 2 chargers, or destination chargers, at 50 kilometre distances This would cater for vehicles with smaller batteries and those who wish to spend some time in a town or location i.e. linger and spend. These chargers should be also located offset to the main route so people can enjoy regional tourism opportunities.

As an initial improvement, we would encourage the installation of at least two 15amp publically accessible outlets, with designated parking in as many towns as possible along the route. Although not fast charging, this is relatively cheap and would be a good public awareness program that would encourage electric vehicle patronage within the community and assist in 'normalising' electric vehicle ownership and use.

So although the majority of time people only travel around 30 kms each day, people do wish to drive interstate. The argument of not being able to travel long distances is a common barrier to people purchasing an EV. By having a network in place, this barrier is removed on the Adelaide to Melbourne route as well as regional destinations and there would be a two-way movement of vehicles, benefiting 'green tourism' etc. in both States.

4. Standardising of EV charging bay symbols

We feel there needs to be a national standard for symbols used to designate a charging bay. This would remove confusion for all users.
Also we feel there should be enforcement around usage, similar to what we see with accessibility parking. This would ensure EV owners have confidence that a bay will not be taken up by a non-plug-in vehicle.
To ensure that the spaces are used for charging and not general parking, there should be a system that ensures vehicles are moved after charging is complete and then the space is available for the next vehicle. For example, this may include an alert on your mobile phone, or incurring an escalating cost if a vehicle is left for an extended period after charging had finished.

5. Standardising the applications used to access charging stations

Currently there is a mix of different providers operating charging networks. They all require a different app that is accessed via your smart phone. This can be confusing and frustrating, especially if you do not have a phone capable of down loading the app.

It would be advantageous if there was one system in place, for example a 'payWave' facility. For example we currently use our credit cards, to make payments in carparks, so if the same system could be adopted, that would take away this level of frustration and barrier to access charging facilities.

6. EV manufacturing in South Australia

This is undoubtedly the most exciting proposition for SA. SA has a long history of vehicle manufacture and only recently closed manufacturing at Elizabeth.

Currently the availability of EVs to purchase in Australia is relatively low and is a barrier to adoption. There are a number of reasons for this. The first is that Australia is right hand drive where the major markets, i.e. North America, Europe and China are left hand drive.
Demand for EVs is growing in these markets, so production capacity tends to be geared to satisfying these markets, rather than the relatively smaller right hand drive Australian market.

The relative cost of an EV in Australia is higher than other markets ie the extra cost of shipping vehicles, tariffs, etc, so the uptake is lower.

Manufacturing an EV is cheaper and less complicated than manufacturing an ICE vehicle i.e. less components, less time etc. so it is possible to produce an EV designed for Australian conditions, that will retail at a more general price, compared to the current costs of EVs.

There have been some comments in the media about the possibility of EV manufacture in Australia. We feel it would be good if that happened in SA as it would tap into the existing skilled work force, ie design and construction, and reinvigorate the components sector. It could also work in well with local steel production, adding value. It would also have the potential to create export markets.

An important extra spinoff is establishing a skills base and career paths for designers, engineers etc, which has the effect of building the skills base of the State. It also has the potential to spawn high tech based businesses i.e. advanced material manufacturers, software development, electronics, engineering etc.; the jobs of the future.

7. Formula E for Adelaide

There is growing interest in the electrification of motor sports. Recently an electric vehicle won Pikes Peak and the Goodwood Festival of Speed. Motor racing captures the public's imagination. In the case of EVs it removes the myth that EVs do not perform.

By hosting a round of the Formula E in Adelaide, there would be more than just the race, but a host of aligned activities with a focus on e-mobility.

Racing also spawns innovation. For example Renault and Jaguar have used Formula E as a testing ground for their road going vehicles, in particular battery management.

This event would dovetail nicely into EV manufacturing in the state, as the innovation demonstrated on the track has the potential to be transferred quickly to the road going vehicles.

By hosting a round of the Formula E in Adelaide, it would build on Adelaide's rich history of staging major motor sports events and see Adelaide become the focal point for electric vehicles within the region.

It could also tie in with the internationally recognised World Solar Challenge.

www.facebook.com/FormulaEAdelaide/?fref=nf&pnref=story

8. Establishing an EV experience centre e.g. Rundle Mall, Tonsley

What has been found from overseas experience, is that an EV is really a very new experience for people. At Milton Keys in the UK they have set up an EV experience centre designed to provide that initial point to engage with EVs. It is based in a major shopping centre and provides a comfortable, convenient, relaxed opportunity for people to come in to look at vehicles and talk to an EV expert. It is not brand based, so not a sales environment.

Rundle Mall or Tonsley would be good locations for an experience centre and provide that contact and also help to dispel possible concerns people may have.

www.youtube.com/watch?v=1s-I4vm9Q788

9. State government waiver of stamp duty and registration fees for a set period

Given that EVs are priced at a premium it would be good to provide some financial incentives.

Two to consider are removing stamp duty on sales and registration fees for electric vehicles. This would provide some relief when purchasing the vehicle and then for ongoing costs. We would recommend a rebate on registration, say for a maximum of three years.

We feel this would be a good financial signal to people purchasing an EV, that the Government supports and encourages the uptake of EVs and electric mobility.

Overall, we see the adoption of electric vehicle as providing social, economic and environmental benefit not only to South Australia, but Australia as a whole. As the world is moving towards electrification of the transport system, it is important that Australia takes fully advantage, ie socially, economically and environmentally, of this shift and not be left behind.

Yours sincerely,

Paul Koch
Chairperson
AEVA SA.