



## AUSTRALIA ELECTRIC VEHICLE ASSOCIATION Adelaide Branch

### **The shift to electric vehicles, it's rolling forward.**

As our cities grow we place pressure on the resources that support them.  
It is important now to think of the future we want, and plan and implement it now.

A growing concern is sustainability, in particular our reliance on fossil fuels for personal mobility and the livability of our cities

For many it is inevitable that the future will be electric drive, for example the director of the Western Austrian Electric Vehicle Trial at the University of Western Australia, Professor Thomas Braunl is convinced the future will be electric.

"In terms of 10, 20 years ahead, I think we'll see a significant fraction of all new cars sold being electric," he says. "At first this will definitely be limited to the inner city, so I think the best market for pure electric cars or battery electric cars is going to be as second family cars....Once there's consumer interest, a lot of funding will be diverted to that sector and we're going to see an increase in battery capacity and we're going to see rapid-charging technology becoming mainstream."

So over a fairly short period of time electric cars will become more mainstream, and with technological development, range and acceptance will increase.

But emerging technologies will not be the only driver of change. Increased urbanisation will force us to radically review the way we live and ultimately the way we move around.

University of South Australia sustainable design expert Professor Steffen Lehmann says we must consider the way we commute. Lehmann, who has held the position of UNESCO chair in sustainable urban development for Asia and the Pacific since 2008, contends that Western society has moved down a path in urban design and placed the motor car at its centre, but that imminent modification of the way cities are designed and laid out will encourage the use of electric vehicles and reduce the need to commute.

"We need to transform the city for sustainability, meaning more liveable, more walkable, more pedestrian-focused," Lehmann says. He reports that this change is already taking place in Europe and Asia.

"The car will not go away but the car has to become less important in our lives. Electro-mobility will come very fast - much faster than most people think. It will deliver a built environment that is less noisy and less polluted. If you have people getting around without making noise, it's fantastic."

"People can walk and cycle. This will allow planners and architects to build the city differently. This means people can move back into the city centre, open their windows to cross-ventilate their office or apartment....This will allow us to transform the city back into what it used to be before the car made it impossible. Electric cars will allow us to have a different lifestyle. In 20 to 30 years, all cities will operate on this premise."

So we see two important drivers to the shift to electric vehicles; a need to reduce our reliance on fossil fuels (sustainability) and to create, by necessity, more liveable cities.

At the moment people have two options to adopt electric drive. They can purchase a commercially produced vehicle or convert an existing vehicle.

Both have merits and should be encouraged.

A hurdle for many people to adopting electric vehicles (EVs) is cost and range.

Commercially produced vehicles are technologically exceptionally. They combine safety, comfort and functionality into a complete package. The hurdle here for many is cost. The other option is a home conversation. Older lighter cars are converted to produce very functional vehicles. The hurdle here is partly the cost and the expertise to complete the conversion. As Professor Brauml so rightly points out, once consumer interest increases, electric car adoption will increase. Demand will drive innovation.

As a State how do we get in front of the game and drive the shift to electric vehicles? This shift will drive innovation and industry. There are a number of simple and cost effective incentives that can be used to drive the process. Below are initiatives that can be adopted.

- Have access to off peak rates for EV charging. Generators operate 24 hours of the day so it makes sense to encourage people spread the load across the whole day, so off peak rates are used. There is a concern that EVs add to peak demand, so by providing off peak charging, this reduces the concerns. Also by using off peak the cost of charging is reduced making the adoption more favorable.
- Reduced registration fees. This encourages people to offset the high cost of purchase or conversion. It helps to reduce the payback period and makes the switch more palatable.
- Use of bus lanes in city, encourages people to use electric cars in the city and increases incentive to own and drive. This rewards people with EVs and sends a message of the future of mobility
- Increase the number of Provide Public charging points. This is the chicken or the egg situation. The EV Recharging Infrastructure Grants for example are a good start but needs to be expanded. Charging points will help to relieve the issue of range anxiety. It provides a safety net for people. If people feel comfortable with the range and the availability of charging points they are more likely to switch to electric.
- Provide incentives such as rebates for the purchase of a commercial EV or a conversion. There is a higher capital cost to purchase or convert when compared to conventional vehicles. By providing a rebate, for example like that which is provided for gas conversions, this technology is encouraged. Like gas conversions there is a positive environmental outcome, for example. The more EVs on the roads the more commonplace it becomes and generally accepted. This provides a positive feedback loop that drives innovation and industry within the State. For example the establishment of businesses that convert cars, research and development that spawns new industries etc. It would create a climate of innovation within the State and provide a lead for other States to follow.

The Australian Electric Vehicle Association is committed to the mass adoption of electric vehicles. It has a well established network that can assist, were possible, with conversions and also provide information on commercially available vehicles. It also has the capacity to provide input into policy design and implementation strategies.

The Adelaide Branch of the Association invites interested people to become part of this exciting mobility revolution.

#### References

<http://news.drive.com.au/drive/motor-news/car-gazing-the-cars-of-2040-20110106-19grk.html>