

Committee Secretary
Department of the Senate

Via email: electricvehicles.sen@aph.gov.au

Dear Secretary,

Senate inquiry into the use and manufacture of electric vehicles in Australia

The Australian Manufacturing Workers' Union (AMWU) represents over 70,000 workers who create, make and maintain in every city and region across Australia. We represent workers employed in the vehicle manufacturing industry.

The development of the market for electric vehicles (EVs), in the global context of a carbon constrained future, provides the federal and state governments with an opportunity to secure Australia a place in a growing market. This industry will provide high skill, high wages jobs now and in the future and the global race is on to secure them.

The governments of other nations are already taking steps to encourage domestic industries to flourish. Without government support, the domestic industry – already reeling from the end of the conventional vehicle manufacturing industry – will miss out on this incredible opportunity.

We have the skilled workers, we have much of the key infrastructure, what we need is for government to invest in this industry and grow Australian advanced manufacturing and secure the good jobs of the future.

A new approach to Industry policy

There is significant interest on the issue of EVs around Australia with reports on the industry from the Victorian and Queensland Governments, and ARENA in the last 12 months. Despite this, there has been no leadership from the federal government.

The hallmark of the vehicle manufacturing industry, more than almost any other industry across the world, is government involvement and support. It was the case here, before the current government's decision to close down Australia's industry, and remains the case in each nation in which car manufacturing takes place today. There is no reason to believe that the manufacture of EVs will be any different to conventional vehicles in this regard.

It is easy to see why governments around the world support their vehicle manufacturing industries. They are large employers, who pay good wages, provide stable jobs, engage significant supply chains and produce some of the most complex goods in the world. Vehicle manufacturing relies heavily on research and design, invests heavily in training and infrastructure and they are a significant export commodity. There is no reason to believe any of this will change for EVs.

If Australia decides that it wants the high skill, high wage jobs that will come with EV manufacturing, and the AMWU believes that we should, then the question isn't whether the government will need to be involved, but rather how best should the government be involved to achieve this outcome.

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The AMWU submits that EV manufacturing is an ideal candidate for a new approach to building and sustaining valuable domestic industries. We believe that the government should investigate taking a mission-based approach to industry policy in order to develop an EV manufacturing industry in Australia.

Understanding Mission-Based Industry Policy

Mission-based industry policy is based on the idea that it is government's role to solve the problems faced by its citizens and their communities. This is achieved through strategic public investment aimed at driving innovation and cross-sectoral collaboration.

This requires a reimagining of the public sector into a dynamic, risk-taking, active participant in the multi-decade life of a mission-oriented, strategic public investment project. The government does not "pick winners" but aims to rely on experts and industry to work together to achieve a defined and incentivised public policy outcomes.

In essence, the government would create new markets rather than attempt to manipulate existing private sector markets. This is a new approach for government industry policy. Public investment would reward innovation, collaboration and success while engaging with the private and non-government sectors to achieve its desired outcomes.

The Mission – Develop an electric vehicle manufacturing industry in Australia

The mission-based model aims to engage a much wider range of participants to build a new industry. The success of this approach depends on experts and organisations outside the traditional scope of the vehicle manufacturing industry being engaged.

The Automotive Transformation Scheme (ATS) was the most recent form of industry support for the vehicle manufacturing industry in Australia. This approach to industry policy was successful in supporting an existing industry to help it to grow and change – indeed, you had to be producing a significant volume of automotive components to be eligible for assistance. This is not the model that we are proposing an emerging industry like EV manufacturing in Australia.

The outcome of this mission-based project may not be a passenger EV industry; it may result in a domestic industry that produces heavy vehicles, specialty vehicles or the supply of critical components to a global supply chain. The aim of this approach to industry policy is to set a broad goal, create incentives to facilitate collaboration, attract interest and investment from the private sector, while government continues to take an active role in monitoring the project as it develops.

To embark on a program to develop an EV manufacturing industry in Australia, it is important to understand what return the Australian community would want from its investment. To ensure that the vision is clearly understood, a broad, overarching mission statement should encapsulate the desired outcomes to participants and the community.

We suggest that a mission statement along the following lines would be a suitable place to start the discussion:

That Australia will develop an electric vehicle manufacturing industry that:

- 1) Produces high quality electric vehicles and components that appeal to buyers in Australia and around the world.
- 2) Is deeply engaged with all parts of the production of electric vehicles around the world throughout their life cycle.
- 3) Provides stable, high wage employment for skilled workers
- 4) Improves environmental outcomes through the use of electric vehicles

Battery Manufacturing

Elaborately transformed manufactures (ETMs) make up less than 2% of Australia's GDP, down from 3% since 2000 and remains very low by international standards. This measure is often used as an indication of the complexity of an economy and on this measure, Australia has gone backwards since the 1990s.

To reverse this, we need to ensure that we capitalise on our natural advantages and export sophisticated manufactured goods, rather than simply digging up or growing primary products and putting them onto ships. As the home to a large portion of the worlds supply of Lithium, battery manufacturing is an opportunity to improve the complexity of Australia's economy.

As part of a mission-based approach as set out above, developing a battery industry would show that we're serious about creating manufacturing jobs. It would put Australia at the centre of an important, technologically advanced supply chain for the vehicles of the future. We have significant expertise in cutting edge battery technology in Australian universities and defence industries and we should use it to build a home-grown industry.

The industry could also play a critical role in up-cycling and recycling batteries once they can no longer be used in EVs. The management of lithium-ion EV batteries over their entire life cycle is vital in mitigating the potential environmental damage from the increased use of batteries as we shift to EVs.

Hydrogen powered vehicles

With its abundance of renewable energy, Australia also has the potential to be an energy export powerhouse with the emergence of hydrogen fueled vehicles. As the process of creating hydrogen is energy intensive, the only environmentally sustainable way to produce it is with renewable energy. Australia – through the CSIRO – is already a world leader in the technology required to safely produce, store and transport hydrogen. The government should investing in this technological advantage to ensure that it delivers jobs to Australian workers.

All hydrogen powered vehicles will be EVs, as hydrogen powered turbines provide electricity to essentially recharge batteries as the vehicle is used. This method of transport is much more similar to conventional vehicles, as refueling is quick and the requirement for expensive batteries is reduced. Depending on the future trajectory of technological development, there is significant scope for hydrogen powered vehicles to play a major role in the future of transport around the world.

An established hydrogen manufacturing industry will not only support EV manufacturing in Australia but may also play a role in providing energy security to Australia and the world.

Skills and infrastructure

Australia is uniquely placed as a country with a ready supply of skilled workers capable of building a world class EV manufacturing industry. As a result of the closure of Australia's conventional automotive manufacturing industry, there are many workers capable of supporting the development of an electric vehicle industry in Australia.

In addition, there is also a significant infrastructure to support the development of such an industry in Australia, particularly in the former regions that hosted automotive manufacturing facilities until recently. These areas have vocational education providers that specialise in the skills required, they have connections for import and export, and are close to established supply chains.

Conclusion

The AMWU believes that Australia has the skills, infrastructure and natural resources to build and sustain a domestic EV manufacturing industry. There has already been interest from state governments, it is time for the federal government to take action and provide the resources and leadership required to get the ball rolling.

We have set out a vision for a new approach to industry policy that focuses on an engaged government actively working to build cooperation and collaboration to develop an innovative and advanced EV industry in Australia, but time is of the essence.

The global race is on to secure the high skill, high wage jobs that will be delivered by EV manufacturing. It is time for the government to make sure that Australia gets its fair share.

Kind Regards,

Paul Bastian
AMWU NATIONAL SECRETARY