

31 March 2021

Future Fuels Strategy Discussion Paper
Department of Industry, Science, Energy and Resources
GPO 2013, Canberra, ACT, 2601

Submitted electronically at: <https://consult.industry.gov.au/climate-change/future-fuels-strategy>

Dear Sir or Madam,

Future Fuels Strategy Discussion Paper.

The Australian Energy Council (AEC) welcomes the consultation opportunity in the Department of Industry, Science, Energy and Resources discussion paper on the Future Fuels Strategy.

The AEC is the industry body representing 22 electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. These businesses collectively generate the overwhelming majority of electricity in Australia and sell gas and electricity to over 10 million homes and businesses.

The AEC has not responded to all the matters raised in the discussion paper.

1. Early focus on commercial fleets

The establishment of foundation fleets of lower or zero emissions vehicles through the early focus on commercial fleets is an area where actions by both national and sub-national jurisdictions can make a positive difference. All state governments have a role to play in supporting the uptake of zero emissions vehicles (“ZEVs”) or low emissions hybrid vehicles through incentives such as stamp duty and registration concessions, which combined with Government fleet targets, such as those envisaged in the discussion papers ‘fleets first’ approach establish a critical fleet scale.

Whilst the AEC acknowledges the important role played by the Federal Government in setting emissions policy, there is more likely to be significant benefits in state-based action in the land transport sector. This is because:

- Land transport infrastructure and regulation is almost entirely the responsibility of subnational jurisdictions;
- The transport sector is likely to be more responsive to direct state and local government actions, through their existing regulatory roles, such as vehicle registration and parking controls. These roles are likely to be more effective in encouraging improved consumer choices than the Commonwealth’s more indirect role in fuel excise and vehicle standards; and
- In most state jurisdictions transport emissions are on a consistently strong growth path and show no sign of peaking in a business-as-usual future.

As the purpose of the Future Fuels discussion paper is to inform the priorities for the Commonwealth’s work with state and territory energy ministers, the AEC supports the efforts at coordination at the Council of Australian Governments to integrate electric vehicles into the electricity grid.

The discussion paper notes that hybrids may have emissions reductions benefits that are superior in some states, where a hybrid has a lower emissions intensity profile than driving a battery electric vehicle (EV). Whilst this may be correct there are two important mitigations in this regard:

- Electric vehicles are considerably more energy efficient than conventional vehicles and less emissive even when supplied with fossil-fuelled electricity¹;
- Electric vehicles can be readily charged from excess rooftop solar PV which has zero emissions, and;
- The emissions profiles from electricity generation in each state are changing rapidly with the penetration of distributed and grid scale renewables as a function of jurisdictional and federal policy.

The discussion paper highlights the ‘fleets first’ approach as an effective pathway for early adoption, noting that businesses account for around 40% of new light vehicle sales. The AEC encourages a technology neutral approach to any incentives for lower or zero emissions fleet vehicle purchases, to encourage widest range of new vehicle technology models in Australia.

2. Electric vehicle charging and hydrogen refuelling infrastructure where it is needed.

The discussion paper contemplates that the Australian Government funding will leverage private sector and state government funding for projects that reduce barriers to the uptake of new vehicle technologies. The Energy Council believes that during the early stages of the ZEV market in Australia, fast charging infrastructure is likely to present a challenging business model for private sector investment, as ZEV ownership is low.

International experience demonstrates a strong correlation between public charging or refuelling infrastructure and the uptake of ZEVs.² The AEC has encouraged grant programs that ensure both sufficient and efficient investment in fast charging infrastructure. The Victorian Government’s agreement with Chargefox is one among a number of good jurisdictional examples of what can be achieved through grant programs.³

Noting that public infrastructure has already had significant funding, the AEC believes that now grant funding could be prioritised to smart EV charging at both households and business premises. Such charging is going to be a key enabler to integrating EVs with the grid. Many fleet vehicles have a component of private use and EV’s could be readily and conveniently charged and contribute to domestic smart grids. Fleets located at business premises will also require support with establishing charging infrastructure in the near term. Integrating a more dispersed fleet into the grid will better match the distributed nature of future energy than centrally located high volume charge points.

¹ Clean Green Machines, the truth about electric vehicle emissions, The Conversation, <https://theconversation.com/clean-greenmachines-the-truth-about-electric-vehicle-emissions-122619>

² Roll-out of public EV charging infrastructure in the EU, Transport and Environment, September 2018 https://www.euractiv.com/wp-content/uploads/sites/2/2018/09/Charging-Infrastructure-Report_September-2018_FINAL.pdf

³ Victoria charging ahead with electric vehicles, Department of the Premier, press release, 25 October 2018 <https://www.premier.vic.gov.au/victoria-charging-ahead-with-electric-vehicles/>

3. Integrating battery electric vehicles into the electricity grid

There is potential that in some locations local peak loads will increase as more ZEVs join the fleet and that this may signal that the upgrading of local grids is required. However, the AEC believes that the appropriate coordination of vehicle charging could readily reduce peak loads in many cases.

The discussion paper notes that:

Unmanaged battery electric vehicle charging, especially during peak demand periods, could contribute to electricity network congestion where battery electric vehicles are concentrated. In contrast, well managed charging could provide valuable grid support while unlocking benefits for consumers.

The paper further identifies that:

Action is needed to influence vehicle charging to reduce network congestion risks and help manage electricity demand to benefit the grid.

The AEC is concerned that the rise of distributor centric models that displace the consumer as the centre of DER frameworks (such as the narrow objective “to benefit the grid” above) are jeopardising the emergence of a competitive market for DER services that could and will manage the anticipated congestions created not only by ZEV’s, but also by rooftop solar and customer owned storage. It should go without saying that consumers purchase an EV as a means of transport and should not be required to use them in a particular way driven by a narrow definition of benefits.

Enabling responsive Distributed Energy Resource (DER) means enabling consumers with DER to participate in competitive market services for the provision of the energy system’s broader needs. Where required, incentives should be offered to change behaviour, either by retailers or other parties supplying energy services, and also by networks supplying distribution services. This latter is different to the “direct and control” paradigm that is current in distribution services. The challenge for the development and fostering of the emerging non-network services industry that is required to respond to the energy security and network reliability challenges of both high (DER) penetration and the increase in EV’s is that it is not hampered or lost to a distribution centric market design focused on grid benefit to the exclusion of other benefits.

Finally, a thriving non-network services sector is a precondition for competitive tension in network services markets. Effective competition in the non-network services sector and a contestable market for the services provided by the non-network services industry will both enhance consumers’ long-term interests and stimulate industry development.

Any questions about this submission should be addressed to David Markham by email to david.markham@energycouncil.com.au or by telephone on (03) 9205 3107.

Yours sincerely,

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