



**Government
of South Australia**

Department for
Energy and Mining

Our Ref: 2024D020205

Committee Secretary
Standing Committee on Climate Change, Energy, Environment and Water
Email: cceew@aph.gov.au

Dear Committee Secretary

RE: Inquiry into the transition to electric vehicles

I refer to your correspondence to the Hon Peter Malinauskas MP, Premier of South Australia dated 29 January 2024, inviting the South Australian Government to make a submission to the inquiry into the transition to electric vehicles.

The Department for Energy and Mining (DEM) provides the following information in relation to the Terms of Reference:

- The establishment of resources, systems and infrastructure required to support the transition to EVs
 - a. Forecasting future electricity demands on the grid because of the transition to EVs is required to inform infrastructure planning for power generation and storage, transmission, and distribution requirements.
 - b. Installation of more DC charging stations is required to support increased demand, especially in regional, remote and off grid areas.
 - c. Continued support by the Commonwealth Government, including for substation upgrades and increased capacity for designated towns and strategic locations through mechanisms such as Rewiring the Nation would be supported by the Department for Energy and Mining.
 - d. Regional and remote areas face significant challenges in transitioning to electric vehicles, especially where grid capacity is limited. The majority of South Australia's land mass is not covered by the national electricity grid. To provide regional communities and freight with access to the benefits of electric vehicles significant investment in the local electricity grid and zero emission fuel infrastructure will be required.
 - e. EVs and vehicle charging technologies, in particular plug types, are developing at a rapid pace and there are multiple options on the market. This can present challenges for decision making on charging infrastructure; and associated updates to standards,

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regulatory frameworks, and processes. The Department for Energy and Mining would welcome advocacy by the Commonwealth Government for international consistency in plug types.

- f. Consideration will need to be given to ensuring appropriate cyber security protocols and systems for EV charging infrastructure.
- The impact of moving from internal combustion engine vehicles, including fuel excise loss, existing auto industry component manufacturers and the environment:
 - a. While the transition to EVs will support reduced greenhouse gas emissions in the transport sector, consideration must be given to implementing product stewardship schemes for batteries, including to encourage reuse, repurposing and reprocessing, as well as mandating end of life decommissioning.
 - b. Consideration will also need to be given to decommissioning/waste resulting from replacement of existing internal combustion engine vehicles, as well as the role of e-fuels and hydrogen fuel cell vehicles.
 - c. There is potential for revenue for fleet operators from Vehicle-To-Grid (V2G) and Vehicle-To-Load (V2L).
- The impact on electricity consumption and demand:
 - a. The Electricity (General) (Planning and Forecasting Function) Amendment Regulations 2024 introduce a state-based electricity planning and forecasting function. This function will enable the development and ongoing maintenance of a South Australian Electricity Development Plan to ensure electricity supply capacity can meet demand reliably and securely while also meeting South Australia's carbon emissions targets.
 - b. Need to ensure that the transition does not lead to increases in electricity costs for consumers, including through encouraging charging through periods of high renewable generation and/or low demand.

Paul Heithersay PSM
CHIEF EXECUTIVE

21/03/2024