Submission form: Victoria's draft 30-year infrastructure strategy

Your details

Name:	[redacted]
Organisation (if applicable):	Tesla Motors Australia
Position (if applicable):	[redacted]
Email:	[redacted]
Phone:	N/A

About you

Please tell us which best describes you:

- ☐ Victorian resident
- ☐ Victorian business owner/operator
- ☒ Industry professional
- ☐ Community organisation representative
- ☐ Local government representative
- ☐ State government representative
- ☐ Researcher
- ☐ Other (please specify): Click or tap here to enter text.

Your focus areas

Select the topics or regions you are providing feedback on (select all that apply):

Topics	Regions
☐ Across sectors	☐ Regional Victoria
☐ Circular economy	☐ Urban growth areas
☐ Cities	☐ Melbourne
☐ Climate change	
☐ Community infrastructure	
☐ Education	
☒ Energy	
☐ Freight	
☐ Health	
☐ Housing	
☐ Infrastructure for Victoria's First Peoples	
☐ Transport	
☐ Water	

Your feedback

Add as many sections as you need to provide all your feedback in this submission.

Topic/area:	Energy
Recommendation name:	Invest in home, neighbourhood and big batteries for more energy storage
Recommendation number:	31
1. Do you support this topic or recommendation?	☒ Yes ☐ No ☐ In part
2. Tell us why	For Draft Recommendation 31, 'Invest in home, neighbourhood and big batteries for more energy storage', Tesla welcomes Infrastructure Victoria's recognition of the diverse benefits that different storage sizes can provide, based on their ownership model (household, community group, developer) and location behind the meter, front of the meter in the distribution network, or in the transmission network.
3. Share any supporting evidence or examples	Click or tap here to enter text.
4. Include proposed changes and improvements	Tesla aligns with Infrastructure Victoria's recognition of the benefits of virtual power plants (VPPs) and coordinating CER. The Solar Homes Program has been a successful first step in supporting the uptake of household batteries through loans and rebates, as well as broader VPP education. Tesla recommends designing a state scheme that has the potential to combine with any federal rebate incentive to best support consumers in reducing their energy bills and contributing to the energy transition. Tesla encourages Infrastructure Victoria to take a whole-of-system approach to addressing the evolving needs of the Victorian power system. When considering the merit criteria for project investment, consideration should be given towards multi-use assets to reduce the system total cost to Victorian consumers. Battery storage systems have proven their ability to provide energy arbitrage, frequency control ancillary services (FCAS), essential system services (ESS) such as inertia and system strength, with premium speed and accuracy. Batteries are flexible assets that can add value through other emerging applications, such as acting as virtual transmission to increase REZ transfer capability and reducing the spend on transmission network augmentation.

Topic/area:	Energy

Recommendation name:	Determine long duration energy storage needs
Recommendation number:	32
5. Do you support this topic or recommendation?	☐ Yes ☐ No ☒ In part
6. Tell us why	For Draft Recommendation 32, ‘, Tesla welcomes Infrastructure Victoria’s support for managing the exit of coal. Tesla looks forward to future engagement on duration and to supporting the Victorian Government’s to develop policy and consult on long duration storage to support Victoria’s needs, taking a data-backed approach. Tesla’s existing analysis into the NEM and Victoria’s duration requirements finds the most cost-effective approach for requirements to be four hours, and suggests a smaller, more tailored scheme for extreme tail risk in the 2040s and beyond. This would align with AEMO Services review and analysis of the Long Duration Storage requirements for NSW’s Electricity Roadmap. A four-hour requirement for firming capacity is supported by the AEMC Reliability Panel’s ‘Review of the form of the reliability standard and administered price cap’ final report; and NSW EnergyCo Advisory Board member Alex Wonhas’ modelling in the article: ‘How much storage? What’s the cost? Now you can build your own Integrated System Plan’. This is also consistent with the findings from numerous global studies from NREL and CAISO in the US, the UK Capacity Market, and WA’s Electric Storage Requirements all fully accrediting 4-hour storage. The AEMC’s Review of the Reliability Standard, identified that 96 per cent of unserved energy (USE) events have a duration of less than 6 hours. This is a forward-looking model for financial years 2035 to 2040, and thus is a model with higher levels of renewable penetration that is reflective of Victoria’s longer-term objectives of reliability. Whilst the market need for additional firming capacity may increase as large, centralised thermal generators retire, modular technologies such as battery storage can be built to value power capacity now (as per system needs), with additional storage capacity added over time, if and when it becomes required. This will also allow Infrastructure Victoria to benefit from the technology cost improvements over coming decades - which means consumers won’t have to wear the risk of over built infrastructure and can drive an optimum, and dynamic economic solution that evolves based on market requirements and price signals.
7. Share any supporting evidence or examples	Click or tap here to enter text.

8. Include proposed changes and improvements	Click or tap here to enter text.

More feedback (optional)

Tell us about infrastructure challenges, gaps or opportunities not covered by the draft strategy. This can include things you think we should add to an existing recommendation, or suggestions for a new recommendation.

Please provide evidence for your suggestions. This can include data, specific examples, cost benefit analyses, surveys, or program evaluations. Also, explain how your suggestions align with the objectives of our draft strategy (see page 11 of the draft strategy).

Suggestions for new recommendations should point towards infrastructure opportunities that can deliver long-term benefits for Victorians. They should also be areas where the Victorian Government has a leading role.

Click or tap here to enter text.