


 ATSE

To the Standing Committee on Climate Change, Energy, Environment and Water  
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Dear House of Representatives Standing Committee on Climate Change, Energy, Environment and Water,

The Australian Academy of Technological Sciences and Engineering (ATSE) is a Learned Academy of independent, non-political experts helping Australians understand and use technology to solve complex problems. Bringing together Australia's leading thinkers in applied science, technology and engineering, ATSE provides impartial, practical and evidence-based advice on achieving sustainable solutions and advancing prosperity.

ATSE welcomes the opportunity to provide a submission to the House of Representatives Standing Committee on Climate Change, Energy, Environment and Water's inquiry into the transition to electric vehicles (EVs). The transition to electric vehicles necessitates a comprehensive framework encompassing resources, systems, and infrastructure.

Australia is uniquely positioned to become a major player in the global EV value chain due to its abundant critical minerals, robust renewable energy generation capacity, and cutting-edge technology research.

ATSE welcomed the National Electric Vehicle Strategy as a critical step in making Australia a significant player in the global EV industry and was pleased to see that the strategy aligned with [ATSE's recommendations in its submission to the consultation](#)<sup>1</sup>. The Academy supports implementing fuel efficiency standards to lower EV costs and promotes their widespread adoption in Australia, a crucial step towards meeting the country's climate change commitments. The development of national standards for EV charging infrastructure is another step in the right direction. While the National EV Strategy's focus on managing end-of-life waste from EVs and investing in recycling research is appreciated, more regulatory support is urged for developing second-hand EV markets to further reduce costs and enhance accessibility.

ATSE's [Transport Industry Technological Readiness](#) report found that the Australian transport sector is least prepared in terms of Infrastructure readiness and skills availability for low and zero-emission vehicles, connected autonomous vehicles and high-frequency mass transit<sup>2</sup>. To enhance our global competitiveness, we must invest in Australian capabilities.

ATSE recommended in its submission to the [National Battery Strategy](#) to promote both the development and deployment of batteries in Australia, taking a comprehensive and integrated approach, utilising natural resource endowments and setting up appropriate manufacturing capabilities to enable commercialisation and production to meet national demand and build a strong export market<sup>3</sup>. This would help Australia become an important global EV value chain player.

Other key challenges in charging infrastructure and workforce shortages (with fewer than half of advertised jobs for electric vehicle technicians being filled)<sup>4</sup> hinder the development, deployment and management of the EV future. To address these challenges a coordinated effort is necessary. ATSE has the following recommendations for focused, immediate, agenda-setting actions to ensure a smooth transition to EVs:

- **Recommendation 1:** Incentivise EV adoption by implementing a strategy that includes both demand and supply-side policies to address electrification of all vehicle segments (buses, trucks, and micro-mobility for public, private, freight and industrial use).
- **Recommendation 2:** Build a skilled workforce by investing in programs and initiatives to equip our workforce with engineering and technology skills for research, development, and implementation of EV technologies.

- **Recommendation 3:** Target investment in the EV value chain in areas where Australia holds a distinct advantage, like battery manufacturing to accelerate progress as a leader in the global EV value chain.
- **Recommendation 4:** Develop a nationwide network of accessible and reliable EV charging stations, while simultaneously exploring and implementing policies to ensure grid reliability for a sustainable electricity supply of the growing EV fleet.

By implementing these recommendations, Australia can seize the opportunity presented by EVs and become a global leader in this transformative industry. ATSE is committed to engaging with the Standing Committee on Climate Change, Energy, Environment and Water and actively contributing to solutions that would allow for a smooth transition to an EV future.

If you would like to discuss this submission with ATSE further, please contact [academypolicyteam@atse.org.au](mailto:academypolicyteam@atse.org.au).

Yours Sincerely,

Kylie Walker  
Chief Executive Officer, Australian Academy of  
Technological Sciences & Engineering

Katherine Woodthorpe  
President, Australian Academy of Technological  
Sciences & Engineering

#### Reference:

- 1 ATSE. ATSE Submission on National Electric Vehicle Strategy. Australian Academy of Technological Sciences and Engineering. 2022. <https://www.atse.org.au/research-and-policy/publications/publication/atse-submission-on-national-electric-vehicle-strategy/> (accessed 26 Jun2023).
- 2 ATSE. Shifting Gears – Preparing for a Transport Revolution Transport Industry Technology Readiness. 2019 <https://www.atse.org.au/wp-content/uploads/2019/04/Transport-Industry-Technology-Readiness-report.pdf> (accessed 21 Oct2022).
- 3 ATSE. Submission to the National Battery Strategy. 2023 <https://www.atse.org.au/research-and-policy/publications/publication/submission-to-the-national-battery-strategy/> (accessed 12 Dec2023).
- 4 Jake Evans. EV mechanic shortage could worsen under New Vehicle Efficiency Standard, half of motoring jobs already unfilled. ABC News. 2024. <https://www.abc.net.au/news/2024-03-05/ev-mechanic-shortage-new-vehicle-efficiency-standard/103541206> (accessed 12 Mar2024).