

The Hon Catherine King MP
Minister for Infrastructure, Transport, Regional Development and Local Government

24 January 2025

RE: Australian Design Rules Harmonisation Review 2024-25: Tesla Submission

Dear Minister King and Dr Mundy,

Tesla Motors Australia, Pty Ltd (Tesla) welcomes the opportunity to provide a submission to the Dr Warren Mundy led independent review of Australian Design Rules (ADRs) to ensure harmonisation with international standards.

Australia has a unique and critically important role in the global transition to electric vehicles. Every EV across the globe comes from Australia in large part. For example, 80% of the lithium in Tesla's batteries globally comes from Australia.

Tesla commends the Australian Government for initiating this review to ensure ADR complexities and uncertainties are addressed in order to streamline import, homologation and compliance aspects and harmonise Australian requirements with major markets around the world. This will in turn accelerate uptake of EVs in Australia, supporting Australian industry not just in automotive sales but continue to drive demand for our battery minerals at the top of the supply chain. No country has as much to gain from the transition to electric vehicles and we look forward to this review improving harmonisation processes.

Harmonisation has many benefits to both industry and consumers, including: (a) reducing regulatory cost and burden; (b) accelerating EV model availability and enhancing consumer choice; (c) encouraging global manufacturers to prioritise Australia as a market; and (d) lowering end consumer costs, driving EV adoption.

By adopting international standards and removing regulatory friction, Australia can position itself as a competitive and attractive market for EVs while supporting its transition to a low-emission future.

1. Harmonising Australia's approach to vehicle compliance with International Standards

Background

The national standards for vehicles in Australia (ADR) are a complex mix between unique requirements, and borrowing from major international standards, particularly those set by the UN Economic Commission for Europe (UNECE). We commend attempts to adopt international regulations where possible, and note Australia is a signatory to the UN 1958 Agreement and the 1998 Agreement. As Government highlights, harmonisation is also important to fulfil our World Trade Organisation and Asia Pacific Economic Cooperation commitments.

Issue

Currently, Australia has unique ADR requirements that add complexity, regulatory burden, and compliance costs. There is also an issue of a lack of consistency across major markets: Australia differs from the EU in regard to centre top tether ISO-fixes (aligning with the USA), but then aligns with the EU (and differs from the USA) in regard to Electric Vehicles specifically (e.g. on battery safety and charging interfaces). These international contradictions can also be found across cybersecurity, advanced driver assistance and safety features, where requirements are misaligned between ADRs, UNECE, and the USA's Federal Motor Vehicle Safety Standards (FMVSS).

Ultimately this regulatory environment and customisation increases manufacturing costs for models intended for the Australian market, limiting the range of vehicles imported and raising prices for consumers if global models servicing major markets need to be adapted and updated before import to Australia.

In contrast, where ADRs actively attempt to align fully with UNECE, there is ongoing risk that Australian standards fall behind and point to outdated requirements in circumstances where international standards evolve but these updates are not automatically reflected in ADRs. This creates unnecessary confusion and regulatory burden on global OEMs importing vehicles across multiple markets – and may also place Australian consumers at disadvantage when it comes to vehicle choice, cost, and/or safety.

Looking to the future, Tesla acknowledges the Australian Government's intention to be at the forefront of technology and safety for Australian people on Australian roads and under local conditions. However, Tesla sees an opportunity to further progress harmonisation and streamlining of ADR requirements with global standards in a way that does not conflict with these overarching ADR objectives. Tesla also observes that some markets have evolved their regulations in a piecemeal fashion - having the latest vehicle design and safety compliance requirements for some vehicle elements but not others; or introducing barriers for some vehicle types more than others – so flexibility for manufacturers to choose across different global regimes would increase the potential of Australia's harmonisation efforts. In practice, this reduces duplication of testing and speeds up approvals.

Recommendation

Australia has an opportunity to leverage the latest best practice standards from around the world to maximise vehicle safety and consumer benefit. Tesla recommends Australia evolve from its current complex approach to vehicle standards under ADRs and instead allow vehicle manufacturers to self-select relevant, globally recognised regulations (e.g. UN ECE, EEC, FMVSS, Japanese domestic standards etc) and list which relevant standards are being met for each vehicle component (e.g. steering, seats, brakes, lighting etc). Australia could still maintain a limited set of unique ADRs as relevant to the local context (e.g. ADR81 for Australia's vehicle emissions scheme and fuel consumption) if needed.

Therefore, instead of having to detail and document compliance for over 100 independent ADRs (many of which do not map to the latest UN ECE requirements, are unique to Australia, and/or align with other markets such as the US), OEMs can self-certify via a streamlined 'Statement of Compliance' that demonstrates how Australian vehicles meet internationally recognised vehicle standards.

We note Australia is already a signatory to the UN Working Party WP29 and has already adopted many relevant ECE regulations (e.g. Safety Requirements under ADR 42), so progressing these harmonisation efforts whilst also providing flexibility where needed (i.e. including other jurisdiction regimes from US, Japan etc) would allow for greater streamlining and efficiency for all importers.

This approach has been shown to successfully improve harmonisation efforts in other markets around the world, for example in New Zealand, which already offers importers a simplified homologation process relative to Australia's approach on ADRs.

Figure 1: New Zealand Statement of Compliance and Self Certification

Statement of compliance

Make	
Model	
Model code(s)	
Year of manufacture	
VIN/chassis number	
Unladen weight	
Gross vehicle mass GVM	
CO ₂	
Component/system	Standard(s) met (eg UN/ECE Regulation No. 16 for seatbelts)
Door retention systems	
Interior impact	
Steering systems	
Seats and seat anchorages	
Frontal impact	
External projections	
Head restraints	
Seatbelts	
Seatbelt anchorages	
Glazing	
Rear-view mirrors	
Brakes	
Lighting equipment installation	
Lighting components	
▪ Headlamps	
▪ Stop lamps	
▪ High-mounted stop lamp	
▪ Direction indicators	
▪ Reversing lamps	
▪ Rear registration plate illumination lamps	
▪ Front position lamps	
▪ Rear position lamps	
▪ Retroreflective material	
▪ Rearward-facing retroreflectors	
▪ Side-marker lamps	
▪ End-outline marker lamps	
▪ Front fog lamps	
▪ Rear fog lamps	
▪ Daytime running lamps	
Tyres	
In-built child restraint	
Side impact	
Emissions	
Electronic stability control	
Note: record whether or not electronic stability control is fitted, and if so, any standards met.	

1. I confirm that the components and systems listed above comply with UN/ECE Regulations, EEC/EC/EU Directives, ADRs, Japanese domestic standards, or other approved standards for which type approvals are issued by the controlling jurisdictions or certification bodies at the time of manufacture.
2. I also confirm that where test certificates necessary to claim compliance with the above standards are required by the controlling standards authority, these are in existence for the vehicle(s), components and systems identified above and explicitly cover the production facility/facilities where the vehicle(s), components and systems were manufactured.
3. I also confirm that, for any components and systems complying with FMVSS:
 - a. test results are in existence demonstrating compliance of the components and systems with FMVSS, and
 - b. arrangements are in place to ensure conformity of production to cover all stages of manufacture of the vehicle(s), components and systems, and
 - c. the components and systems are designed and manufactured for use in the US.

Signed: _____

Date: _____

Examples

In practice, many vehicle manufacturers may still choose regulatory alignment with one dominant regime for all/most components (e.g. UNECE) but given how quickly vehicle design and safety features are evolving, and new manufacturing regions are opening, providing flexibility to derogate and select from a range of international standards would significantly simplify the compliance process in Australia across multiple models for manufacturers.

For example, Tesla would likely select and reference UNECE compliance for the following passenger vehicle elements:

1. EV-specific components for battery safety (UNECE R100)
2. Charging interfaces (UNECE R101)
3. Vehicle marking (ADR 61)
4. Cybersecurity and Software Update Management Systems (SUMS) (UN ECE R155/156)

Whereas for towing safety (ADR 62), field of view (ADR 93), turn indicators (ADR 6), and rear projection (ADR 92) etc, some of Tesla's utility vehicle models may be better suited to demonstrate compliance under the USA's FMVSS requirements.

Similarly, ADR (as well as UN ECE) standards for daytime running lights (DRL) currently require split lighting, which is quickly becoming out of step with automotive design, where trends are seeing increasing use of continuous light bars that utilise adaptive light beams that can improve visibility and safety, and implement features that can adjust for road conditions, curves and other surrounding vehicles.

Figure 2: ADR requirements for split lights do not reflect automotive design trends



Compliance complexity also extends to heavy vehicles and trucks, where there remains a lack of national policy. For example, historically Australia required standard width of trucks to be 2.5m, which is inconsistent with global standards (the EU allows 2.55m; US is 2.6m) and whilst there have been recent discussions to expand this for battery electric trucks, a streamlined policy across all design elements is still missing¹. Similarly, steering axle mass limits are not nationally consistent – some states have increased limits to 7.5T, others enable trials up to 8T, whereas some have not increased limits at all – creating additional barriers for heavy trucking vehicles with added battery mass (reducing load carrying capacity).

Finally, removing and simplifying the number of unique ADRs should be a general principle, noting that regulations tend to be additive over time, with limited opportunity to streamline or remove redundant requirements that no longer reflect the latest in vehicle design, hardware, or software. As such, Tesla commends the Australian Government for its ongoing efforts to review and harmonise the ADRs.

¹ <https://www.natroad.com.au/electric-heavy-vehicles/>

2. Align with Global Emissions and Efficiency Frameworks

Manufacturers face fragmented reporting requirements for emissions and efficiency under the current ADRs. We commend the Australian Government for setting ambitious vehicle emissions standards via the New Vehicle Efficiency Standard (NVES) framework and note the active consultation regarding exemptions and ADR CO2 testing compliance.

To mitigate risk of further slippage or worsen emissions impacts, Tesla recommends Government re-consider its deadline for the new ADR81 to come into force, with penalties for non-compliance as with any other ADR regime. The current proposal for ADR81 applying to utes/SUVs between 3.5-4.5 tonnes GVM from end of 2026 is still 2 years away, which now effectively gives relevant OEMs more than 5 years (from design to implementation) to adjust their processes to test CO2 emissions for reporting purposes. This is unnecessarily generous and undermines the intent of a scheme that is built on curbing upfront emissions given the cumulative impacts, as well as creating the right incentives for ZEVs to enter Australia early, before technology developments and customer adoption drives further uptake in later years.

Accordingly, Tesla recommends aligning the new ADR81 for utes/SUVs between 3.5-4.5 tonnes GVM from end of 2025 to better align with the wider NVES scheme, noting there are testing processes and facilities for this class of vehicles today.

3. Changes to trade structure and repair qualifications

As we move towards an electrified transport sector over coming decades, it will be essential to have a skilled workforce that can design, manufacture, maintain, and support EVs and their enabling infrastructure. Accordingly, Tesla supports the Electric Vehicle Council's (EVC) calls to ensure that repairers are well-trained to handle the specific safety challenges of EVs as the transition progresses. Tesla also recommends providing blanket access to Service manuals, maintaining current minimum standards, while opening direct supply of additional information at manufacturers discretion (specifically, Security and Safety information). This would enable greater transparency and increased competition to service vehicles, reducing cost of ownership. However, we recommend that any changes to the existing certification framework should be flexible enough to avoid creating barriers for repairers, particularly small and medium-sized enterprises.

For example, we do not support some states exploring making the Certificate III in Automotive Electric Vehicle Technology (AUR32721) a mandatory requirement for all existing repairers seeking to work on EVs. However, we do support recognising AUR32721 as a valid apprenticeship pathway for new entrants to the industry, providing a clear and structured training program for those seeking to specialise in EV repair and maintenance. It is critical that however this future training pathway is structured, it should be nationally consistent, and adapt global best practice.

Most repairers should be able to continue to operate under the current qualifications, which allow them to work across various repair classes (i.e. Update conditional Electrical Licenses to include Automotive mechanics in the list of approved disconnect/reconnect trades). Supplementing this framework with provision of targeted short courses, such as AURETH101 (Depower and Reinitialise Battery Electric Vehicles), ensures repairers are equipped with the essential skills for basic EV repairs and routine inspections. This would allow businesses to upskill their workforce in a cost-effective and timely manner, reducing the financial burden on smaller operators across the industry. This adjustment ensures no safety risks are overlooked, while still allowing trained individuals to supervise apprentices where required.

For those seeking specialisation in diagnostic and complex repairs, more comprehensive training options, such as AURSS00064 (Battery Electric Vehicle Inspection and Servicing Skill Set) or AURSS00063 (Battery EV Diagnose and Repair Skill Set),² should be available but not mandatory for all repairers.

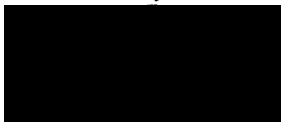
² <https://training.gov.au/Training/Details/AURSS00063>.

Conclusion

Tesla thanks Dr Mundy and Australian Government for its ongoing focus on the important questions ahead of us in this transition, and we look forward to being a constructive partner in that effort.

For any follow ups to any of the items raised above, Tesla would welcome a workshop to discuss our feedback in more detail.

Sincerely,



Thom Drew

Country Director, Australia & New Zealand