

DESIGNING AN EMISSIONS STANDARD FOR AUSTRALIA

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The Authority proposes a standard that would apply from 2018 and be designed with a simple set of features to promote environmental effectiveness, policy stability and equity, and minimise the regulatory burden.

This chapter considers how an Australian standard for emissions from new light vehicles should be designed. Broadly, it concludes that a sensible approach would be a simple, 'no-frills' standard that:

- minimises the compliance burden on industry
- uses existing regulatory frameworks and processes where possible
- could be implemented in a straightforward manner in the proposed time frame.

In the second phase of the standard, this basic design could be augmented with additional features.

This chapter steps through the key elements of a light vehicle emissions standard in Australia and makes findings on the preferred approach. Appendix A outlines international experience of standards and Appendix C provides more detailed analysis and evaluation of design options.

5.1 FRAMEWORK FOR DESIGN OF AN AUSTRALIAN STANDARD

In considering how to evaluate options and identify a preferred design, the Authority has used a simple framework that draws on the statutory principles governing all the Authority's work (Section 1.1), principles of good regulatory design and lessons from similar policies overseas.

The framework for evaluating design choices focuses on the following four elements:

- *Environmental effectiveness*—the standard should ensure that the emissions intensity of new light and commercial vehicles is reduced. The standard should contribute to the overall reduction of Australian emissions.
- *Administrative and regulatory burden*—the standard should be low cost, and simple for government to administer and for industry to comply with. It should draw on existing governance and regulatory structures where possible.
- *Equity*—the standard should ensure, to the extent possible, equity in the compliance burden placed on manufacturers given their diverse product mix.
- *Policy stability and credibility*—the standard should minimise opportunities for gaming, avoidance and market distortions. Participants and the wider public should have confidence in the standard.

BOX 5: MINIMISING COMPLIANCE COSTS THROUGH DESIGN CHOICES

As noted in Chapter 4, utilising a fleet-average, footprint-based design for an Australian standard would provide maximum flexibility for suppliers and preserve consumer choice.

The standard outlined in this chapter is designed to take advantage of existing frameworks and processes to minimise the compliance burden on both the vehicle industry and the regulator. As a result, administrative and regulatory costs to industry and the government will largely be limited to the implementation of IT systems to collate, submit and assess data.

The key element of this approach is using ADR81/02 *Fuel Consumption Labelling for Light Vehicles* as the source of model-specific CO₂ data. ADR81/02 is a mandatory standard that applies to all new light vehicles supplied to the Australian market and is fully harmonised with the relevant UN regulation (R101). Basing the proposed CO₂ emissions standard on ADR81/02 data means the standard does not require manufacturers to undertake any additional vehicle testing. ADRs are subject to regular review to ensure continued harmonisation with the UN regulations on which they are based. This ensures Australia's standards are consistent with those being met internationally.

In addition, vehicle manufacturers are subject to a range of compliance measures under the framework of the *Motor Vehicle Standards Act 1989*, including risk-based audits, to ensure that new vehicles entering Australia comply with all relevant ADRs, including ADR81/02. This system provides a level of assurance that the CO₂ data provided has been obtained from validly conducted tests and collected in accordance with the provisions of ADR81/02.

Most other data elements required for the new CO₂ standard, including model-specific sales data, are already collected from manufacturers by the FCAI. While vehicle footprint data are not currently collected, manufacturers possess this information for all their models, so it is largely a matter of making this a mandatory reporting element.

While further industry consultation would be required, it appears that manufacturers are in a position to provide all the required data for the proposed standard without any additional testing, measurement or analysis. From the vehicle manufacturer's perspective, some IT design work and ongoing staffing resources may be required to collate the required data and establish systems to monitor the company's compliance over the course of each year. The regulator will need to provide an electronic gateway to enable manufacturers to submit the data. It will also need to establish IT systems, with an appropriate level of ongoing staffing, to manage the data, assess compliance and publish annual reports.

5.2 SCHEME DESIGN CHOICES

In designing a standard, several choices need to be made, including, but not limited to, who should be covered by the standard, how it should be measured and enforced, and when it should commence.

In assessing options, the Authority has looked at international experience and considered the views of industry and non-government organisations, particularly as expressed in submissions to the 2011 Department of Infrastructure and Transport *Light Vehicle CO₂ Emissions Standards* discussion paper and the Authority's own consultation in preparing this report.

A summary of the Authority's proposed design features is set out below. Further detail is provided at Appendix C.

5.2.1 A FLEET-AVERAGE, FOOTPRINT-BASED APPROACH

A single, fleet-average standard should apply to all new passenger and light commercial vehicles supplied to the Australian market. The standard would apply to the new vehicle fleet as a whole, not to individual vehicles.

A fleet-average approach preserves consumer choice, reduces the regulatory burden, and offers the greatest flexibility and cost-effectiveness for liable entities. This approach has been widely used in other jurisdictions, including the US and EU, and is broadly supported by industry.

The standard should differentiate obligations based on the size (footprint) of the vehicle, ensuring equity across suppliers while maintaining consumer choice and maximising flexibility. This approach ensures that the option to lightweight vehicles, a major emissions reduction strategy in new vehicle design, is maintained. While mass is more strongly correlated to

fuel consumption, footprint is considered to better relate to consumer utility, and facilitates a more technology-neutral approach to compliance.

The footprint approach is used in the US, Canada and Mexico, while mass is adopted in the EU, China, Japan and the Republic of Korea. While both can work effectively, international evidence favours the footprint approach.

5.2.2 A FIRST PHASE OF THE STANDARD FROM 2018 TO 2025

The new light vehicle emissions standard should commence no later than 2018, with a first phase from 2018 to 2025. An early start maximises the benefits of the standard, as it takes time for changes to new vehicles to improve the overall fleet. A strong standard starting in 2018 generates the greatest emissions reductions and the greatest financial benefits to Australian motorists. This needs to be balanced against providing an appropriate lead time for industry consultation and implementation of the scheme. Internationally, lead times of around three years for the initial introduction of vehicle emissions standards are common.

A first phase from 2018 to 2025 is long enough to allow liable entities sufficient time and flexibility to adjust their business operations, and short enough to not 'lock in' standards too far into the future that may become less appropriate with technology developments, market changes or other factors. Aligning the first Australian target standards to those applying in major jurisdictions, such as the US and EU, could assist with future global alignment and assessment of targets in other key economies, possibly simplifying the compliance process for suppliers.

5.2.3 A SINGLE STANDARD FOR ALL NEW LIGHT VEHICLES

A single standard for both passenger and light commercial vehicles should apply. International evidence suggests that the most effective vehicle emissions standards have broad coverage and the majority of light vehicle emissions standards in other countries, including the US, cover both passenger and light commercial vehicles.

Covering all new light vehicles with a single standard reduces complexity and the risk of gaming, with all liable entities facing similar obligations. With a fleet-average, footprint-based standard, the liable entity can use both technology and vehicle improvements and variations in the product mix of vehicles supplied to achieve compliance, thus minimising the greater challenge often posed by light commercial vehicles. Further, a single standard is unlikely to impose an unfair burden on light commercial vehicle manufacturers in the Australian market, as they tend to supply both light commercial and passenger vehicles.

Second-hand imports do not need to be covered under the standard at this stage. These currently represent a very small segment of the Australian 'new' vehicle market; excluding

them will reduce the complexity of the scheme with minimal impact on environmental effectiveness. Any changes to current restrictions limiting second-hand imports should be monitored and, if necessary, the issue could be reconsidered.

5.2.4 LIABLE ENTITY AND THRESHOLD FOR LIABILITY

Conceptually, the liable entity under the standard should be the same entity as that responsible for Australian certification of a vehicle under the *Motor Vehicle Standards Act*. It would seem to make sense for liability for the standard to lie with the entity that has most control over the mix of vehicles supplied to the market. This would help limit the number of liable entities, which in most cases will be the vehicle manufacturer, and which have the capacity to comply with reporting obligations. The legislative framework for implementing the light vehicles emissions standard itself will need further consideration as the *Motor Vehicles Standard Act* may not be the appropriate Act.

Consultations with industry should be held to confirm the appropriate point of liability, and to consider the implications of any associated decisions to set a threshold for liability.

Subject to such consultations and consideration of how the point of liability will be determined, a threshold for liability of annual sales of 2,500 vehicles is suggested. This threshold would appear to provide an appropriate balance between maximising coverage and minimising compliance costs on entities responsible for small sales volumes, provided it does not trigger significant disaggregation by corporate groups. This threshold would be reviewed prior to considering a second phase of the standard.

5.2.5 A CO₂ EMISSIONS STANDARD USING EXISTING TESTING PROCEDURES

The proposed standard should be based on CO₂ emissions. Internationally, standards based on both fuel economy and CO₂ emissions are common, but an emissions-based standard reflects the primary objective of the scheme and offers a straightforward measure that is relevant across all fuel types. Other greenhouse gases should not be included in the scheme, as the small gain in environmental effectiveness is unlikely to warrant the extra effort, cost and complexity of their inclusion.

The standard should use the CO₂ emissions value collected under ADR81/02 *Fuel Consumption Labelling for Light Vehicles*. This data is collected as part of the existing vehicle type approval certification process under the *Motor Vehicle Standards Act*, which applies to all new vehicles to be sold in the Australian market. It uses an internationally recognised test to measure CO₂ emissions for each model (and its variants). Using ADR81/02 as the data source minimises administrative complexity and reduces compliance costs for suppliers, as the standard would not require any additional vehicle testing.

5.2.6 ANNUAL COMPLIANCE AND EARLY REPORTING

The standard should set annual compliance obligations for liable entities. Annual compliance requires suppliers to meet a set target each year during the first phase of the standard, and thus drives early efforts to reduce emissions, as well as guaranteeing annual improvements. While annual targets may increase compliance costs, the administrative burden imposed is likely to be very small given the reliance on existing procedures and routinely collected data, and outweighed by the benefit of driving early and consistent emissions reductions. In addition, mechanisms such as banking and borrowing (discussed below) allow for normal business ebbs and flows, enhancing flexibility for liable entities.

By 2016, liable entities should be required to report annually on sales and vehicle data needed to underpin the standard. While CO₂ emissions, fuel consumption and other data is already legally required for all new vehicles entering the Australian market under the ADR81/02, the government does not currently collect annual vehicle sales data or vehicle footprint data, which will be required to determine individual emissions targets for liable entities.

Introducing reporting obligations before the standard begins will benefit both industry and scheme administrators. It will help liable entities track their position prior to needing to meet formal compliance obligations, and allow them to make any necessary changes to their business operations. It also allows entities and administrators to refine reporting and monitoring systems.

5.2.7 FLEXIBLE COMPLIANCE MECHANISMS

Banking and limited borrowing should be allowed within phase one of the standard. If Australia adopts standards aligned to other major markets, banking could also be allowed across compliance phases.

Flexible compliance mechanisms, such as banking, borrowing and trading, can give liable entities a range of options to cost-effectively comply with a given standard. They can improve the pace of progress in meeting given standards and help drive emissions improvements, while allowing flexibility in year-to-year performance. Internationally, different schemes use different combinations of these mechanisms, depending on other design features, such as the frequency of required compliance.

Trading is not necessary to the functioning of a vehicle emissions standard. Establishing appropriately robust trading mechanisms for such a small likely market is highly unlikely to be cost-effective and does not appear warranted at this time. While trading can reduce compliance costs and encourage innovation, it also increases complexity and is likely to be a small component of the market. It might, however, be worth exploring opportunities to trade excess credits within existing domestic mechanisms, such as the ERF to provide some additional flexibility for liable entities and possibly drive further reductions beyond the standard.

Multipliers and off-cycle credits are not necessary to the functioning of a vehicle emissions standard and are not proposed at this time. The Authority recognises the potential merit of these options as they can encourage innovation and early adoption and deployment of low-emissions technologies, which can often be high-cost, and can also assist liable entities to comply with a standard. Many countries, including the US and EU, allow liable entities to reduce their reported average emissions by using multipliers and off-cycle credits. These would, however, mean it is more administratively complex to design, implement and verify a standard. A fleet-average standard already creates a direct incentive for innovation—very low-emissions vehicles make it much easier for manufacturers to meet the fleet average. Other incentives for early innovation and outperformance of the minimum standard, such as banking, are proposed.

Well-designed multiplier and off-cycle credit measures could be considered for inclusion in later phases of the scheme.

5.2.8 A FINANCIAL PENALTY FOR NON-COMPLIANCE SHOULD APPLY

A financial penalty should apply to liable entities who do not comply with the standard. Penalties are a critical component of any regulatory scheme and are used as a compliance mechanism in international standards. The form and level of a penalty must be sufficient to encourage manufacturers to comply.

Financial penalties protect the environmental integrity of the scheme, preserve equity and ensure credibility. They are widely accepted as a deterrent for non-compliance and, if set at an appropriate level, have a direct impact on manufacturers' decision-making processes. Further analysis by government will be required to determine the appropriate penalty level.

5.3 SCHEME REVIEW

Good regulatory practice and the government's deregulation agenda require periodic review of regulation to ensure it continues to meet its objectives in a cost-effective way and that unnecessary regulatory burdens are removed. Regular review is particularly important for a standard that is designed to mobilise technology to reduce emissions over time. The standard will need to be reviewed, and presumably strengthened, at regular periods, to ensure that Australia's light vehicle fleet becomes increasingly efficient. The importance of this process can be seen in the US experience, where standards have been in place since the 1970s, but were not adjusted for 20 years, suggesting that opportunities to reduce emissions and fuel usage were missed.

A review of the scheme should commence no later than 2021 to recommend new national average targets for the post-2025 period. The review should aim to set new targets by 2022 for phase two to provide certainty for industry. The review should also take into account the experience of the first three years of the scheme and explicitly revisit design options not implemented in the first phase.

The review should analyse evidence and stakeholder feedback to consider:

- the effectiveness of the standard in meeting the national average target for light vehicle emissions intensity
- the costs and benefits of the policy for vehicle owners and suppliers, the administrative costs of operating the scheme and any unanticipated costs or benefits of the policy
- progress in harmonised testing procedures through the United Nations vehicle standards process, to which Australia is committed
- other international developments and technological progress in light vehicle efficiency, and opportunities for future emissions reductions.

BOX 6: PROPOSED DESIGN OF THE STANDARD

- A single, fleet-average standard should apply to all new passenger and light commercial vehicles.
- The new light vehicle emissions standard should commence no later than 2018 with a first phase from 2018 to 2025.
- Second-hand imports should not be covered under the standard at this stage.
- Subject to further consultation with industry, the liable entity under the standard should be the same entity responsible for Australian certification of a vehicle under the *Motor Vehicle Standards Act 1989* (Cth).
- Subject to further consultation and consideration of how the point of liability will be determined, the threshold for liability should be annual sales of 2,500 vehicles.
- The proposed standard should be based on CO₂ emissions.
- The standard should use the CO₂ emissions value collected under *ADR81/02 Fuel Consumption Labelling for Light Vehicles*.
- The standard should set annual compliance obligations for liable entities.
- By 2016, liable entities should be required to report annually on sales and vehicle data needed to underpin the standard.
- Banking and limited borrowing should be allowed within phase one of the standard.
- Trading is not necessary to the functioning of a vehicle emissions standard.
- Multipliers and off-cycle credits are not necessary to the functioning of a vehicle emissions standard and are not proposed at this time.
- A financial penalty should apply to liable entities who do not comply with the standard.
- A review of the scheme should commence no later than 2021 to recommend new national average targets for the post-2025 period.