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19 September 2025
Standards Australia

RE: Standards Development End-to-End Review

Dear Standards Australia,

Thank you for the opportunity to lodge the Air Conditioning and Mechanical Contractors' Association of Australia Limited (AMCA) submission in response to the *Standards Development End-to-End Review*.

AMCA represents the specialist mechanical services contractors who design, install, commission, and maintain the heating, ventilation, and air-conditioning systems that keep Australia's buildings safe, healthy, and productive.

Our submission acknowledges that the existing committee structure and governance arrangements are fundamentally sound and capable of delivering balanced, evidence-based outcomes. However, the central theme we highlight is the need to significantly improve turnaround times in drafting, review, and adoption. Lengthy delays between proposal, initiation, and publication place unnecessary costs on industry, create regulatory uncertainty, and slow the uptake of new technologies in critical areas such as fire safety, indoor air quality, and refrigeration.

We believe that with targeted reforms — particularly around faster adoption and adaptation of international standards, greater transparency of committee decision-making, better resourcing of drafting, and the use of digital tools to support publication and compliance — Standards Australia can deliver a system that is not only rigorous but also responsive to the needs of a rapidly evolving sector.

We would welcome the opportunity to meet with Standards Australia to discuss our submission in further detail and to provide additional industry perspectives or case studies that may assist the review. Thank you again for considering our input. We look forward to continuing to support this important work.

Yours sincerely,

Scott Williams
CEO
Air Conditioning and Mechanical Contractors' Association of Australia Limited (AMCA)

Submission

Standards Development End-to-End Review

September 2025

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ABOUT OUR INDUSTRY

Heating, air conditioning and ventilation (HVAC) is a significant industry. It contributes over $8 billion to the Australian economy annually, has over 6,400 businesses, and employs over 18,900 people.

The services provided by these businesses are omnipresent in the homes, workplaces and public buildings occupied by the entire community, providing safe, comfortable, healthy, and productive spaces for people to live, work, and recreate.

These services include:

- Heating and cooling for comfort, well-being, and productivity
- Ventilation and indoor air quality
- Fire and smoke control systems
- Air purification for hospitals, laboratories, and other sensitive environments
- Climate control and air quality for commercial and industrial facility premises

Post-COVID, the importance of our industry has become even more widely recognised due to the HVAC systems' role in supplying the air we breathe. With people spending around 90% of their time indoors, the air supplied by HVAC systems is a critical factor in respiratory health, mental health and well-being, workforce productivity, and general quality of life.

The sector's importance is further emphasised by the fact that HVAC systems account for approximately 50% of a building's energy consumption. Indeed, in buildings with older or less efficient systems, HVAC can account for upwards of 75% of total energy usage.

CONSULTATION FOR THIS SUBMISSION

In preparing this submission, AMCA Australia has consulted the following groups:

- Our National Technical Working Committee comprises mechanical engineers registered under Various state-based registration Schemes.

These groups would welcome the opportunity to discuss any issues or views raised in our submission.

OPENING STATEMENT

The Air Conditioning and Mechanical Contractors' Association of Australia Limited (AMCA) welcomes the opportunity to respond to Standards Australia's consultation on the Standards Development End-to-End Review. As a peak industry body, AMCA represents contractors, engineers, and practitioners across the HVAC sector, with active participation in committees including ME-062 (Air Conditioning and Ventilation), BD-012, and FP-001. Through this engagement, and by consulting broadly with our membership, we see firsthand how the current processes affect industry, both in terms of strengths and in areas where delays and inefficiencies create significant compliance and operational risks. The HVAC sector is uniquely positioned at the intersection of fire safety, indoor air quality, refrigeration, and energy transition. Each of these areas is experiencing rapid technological and regulatory change, and standards play a pivotal role in setting the benchmarks that ensure safety, sustainability, and reliability. Our submission provides a response to the consultation paper, outlining the issues as they affect our sector, analysing their impact, and suggesting reforms to strengthen the system.

PRIORITISATION AND ASSESSMENT OF NEEDS

AMCA recognises that the system for identifying and prioritising new standards projects is sound in theory, and we strongly support efforts to align Australian standards with trusted international and overseas equivalents where appropriate. This alignment is best achieved through the existing liaison structures and committee participation that connect Australian experts into the global system. These mechanisms ensure that international material is carefully reviewed and adapted to reflect Australia's unique construction practices, climate, and regulatory environment. In HVAC, for example, standards on fire safety, refrigeration, and indoor air quality often require tailoring to local conditions that international frameworks may not account for, such as extreme climate zones, material availability, or NCC-driven regulatory requirements. Tailored standards are therefore essential, but the front-end process for deciding which proposals proceed must also be transparent and accessible to a broad audience.

From AMCA's perspective, the criteria and processes for accepting new project proposals are generally clear and well understood by industry associations, which are typically responsible for lodging submissions, or by their representatives on committees. However, this clarity is far less apparent to the broader public. While industry associations work to communicate these processes to their member base, this information often does not cut through widely enough, and associations themselves do not have full access to the entire industry — particularly where individuals and organisations choose not to hold membership. Wider visibility of how proposals are submitted, and greater transparency around which organisations and associations are represented on committees, would allow the community to better understand the process as a whole. This, in turn, would enable stakeholders outside the immediate standards network to engage more readily with industry associations and provide input through recognised channels. Improving public accessibility in this way would help accelerate the flow of feedback into standards and ensure that proposals reflect a broader range of perspectives from the outset.

A further dimension relates to standards that govern product testing and certification. In many cases, HVAC products and components are designed, tested and manufactured overseas in compliance with established international testing standards, in many instances local manufacturing does occur but the development is through overseas channels, meaning the design and testing is still undertaken to international standards. These products are already being manufactured to frameworks such as ISO or EN standards, which are widely recognised across multiple jurisdictions. In such instances, Australia should adopt a more holistic approach to recognising and embedding international testing frameworks. Because the performance of a manufactured product depends primarily on consistent testing and certification, rather than local construction or climate conditions, the need for extensive local adaptation is reduced. Greater reliance on international testing standards would streamline compliance, lower costs, and reduce duplication for Australian businesses that are currently required to re-test products to Australian-specific standards, even where they already hold credible international certification.

Another important area is the accessibility and visibility of projects in the pipeline. At present, stakeholders must create a login to access the Standards Australia portal in order to view active projects. This additional hurdle reduces transparency and hinders industry participation. Furthermore, there is little visibility of which organisations or associations are represented on each committee, which limits the ability for the public or industry participants to provide feedback through representative bodies. Making project information publicly accessible — including submitted and active proposals, project timelines, and committee

representation — would not only improve transparency but also empower industry stakeholders to contribute more effectively. Importantly, greater public availability of information would create broader sector visibility and foster stronger community engagement, enabling stakeholders who may not otherwise be connected to the formal process to understand what is under review and to provide feedback through recognised channels. This would strengthen the legitimacy of standards development and ensure that committees are drawing on the widest possible pool of knowledge and experience.

In summary, the front-end framework for prioritising and assessing proposals is sound. The criteria are clear, and the processes are well understood by those active in the system. However, broader visibility of proposals and committee representation, coupled with a more pragmatic approach to adopting international testing standards, would significantly strengthen engagement and reduce unnecessary duplication.

EFFICIENCY AND EFFECTIVENESS OF THE DEVELOPMENT PROCESS

Where the system struggles most is at the back end — the drafting, review, and adoption phases once a proposal has been accepted. Even when projects are identified as valid and aligned with international developments, the speed at which they move through the drafting, consultation, and publication stages is far too slow. This reflects both structural bottlenecks and resourcing limitations, which together undermine the ability of the system to deliver timely outcomes.

A key barrier is the requirement for external sign-offs before drafting can begin. In the HVAC sector, proposals often require agreement from agencies such as the Australian Building Codes Board (ABCB). This inter-agency step has caused major delays. A striking example is a project proposal lodged in 2022, which remains uninitiated more than Three years later because of extended approval processes. Even once agreement is reached, drafting and public consultation would take at least 12 months, with finalisation and publication adding further time. From submission to release, the total process can exceed five years. For sectors such as fire safety, refrigeration, and indoor air quality — where compliance is time-critical and technologies evolve rapidly — such delays are untenable.

These bottlenecks have real consequences for industry. They slow the uptake of new technologies, create inconsistency across jurisdictions, and impose unnecessary costs on businesses. For example, members report fire safety products already tested against internationally recognised frameworks often need to be re-tested in Australia at costs exceeding $50,000 per product line. For smaller businesses, the cumulative burden of re-testing and maintaining compliance with standards that lag international practice can erode margins and stifle innovation.

Standards Australia already distinguishes between revisions, amendments, and shorter clarifications, each with different procedural requirements and typical adoption times. The challenge we see is not the absence of tiers, but that adoption times across these pathways can still be inconsistent and slower than industry needs—especially where the technical change is clearly bounded or aligns closely with established international text. AMCA recommends a risk- and scope-based triage at project gate-in with explicit service-level targets and fit-for-purpose checks:

(i) **Clarifications/errata** for interpretation or editorial fixes issued on a short cycle (e.g., within 30–60 days) to remove immediate ambiguity;

(ii) **Minor amendments** (definitions, reference updates, narrow test adjustments) targeted for completion in **3–6 months**;

(iii) **Adoption/adaptation of an international standard with limited Australian deviations**, targeted for **6–9 months** using a standardised deviations template, or alternatively reducing drafting requirements by directly referencing the international standard and appending it (or key extracts) in appendices or supplementary documents. This approach should be designed in a way that avoids shifting administrative costs onto industry — for example, by ensuring that any referenced or appended material is accessible as part of the Australian Standard, rather than requiring industry to purchase multiple standards simply to achieve compliance.

(iv) **Full revisions** for broad technical change on a longer cycle (e.g., **12–18 months**), retaining the current depth of consultation. This triage would formalise what exists in principle, set expectations up front, and ensure effort and scrutiny are proportionate to the change.

A balanced framework is needed that enables quick adoption while safeguarding both cost efficiency for industry and the flexibility to capture essential Australian deviations. To make those targets real, implementation needs sharper mechanics: concurrent rather than serial reviews with external regulators (e.g., ABCB) for scoped amendments and adoptions; pre-draft "deviation kits" to speed Australianising of international text; short-form public consultation for low-risk amendments; and quarterly "release trains" to batch and publish small changes predictably. A live milestone tracker (public-facing) should show stage gates, current status, and reasons for delay, while standard change-logs and redlines reduce rework between drafts. For time-critical adoptions, a conditional adoption notice (signalling the agreed technical content while formal cross-references are finalised) would give industry early certainty. Together, these measures preserve rigour for major work while materially improving turnaround for clarifications, minor amendments, and adoptions—where speed delivers the most value with the least risk.

AMCA also recognises that while these improvements to speed and process are essential, they cannot come at the expense of the people who underpin the system — the committee representatives themselves. The vast majority of standards work is undertaken by volunteers from industry who give up significant time away from their businesses and projects. This has a real cost implication, and as time pressures increase, there is a risk of reduced engagement if the burden becomes unsustainable. To mitigate this, funding models need to be explored. One option is to bolster Standards Australia's internal drafting capability, with employees undertaking more of the drafting work and committees providing structured review to ensure that updates remain fit-for-purpose. Another option is to consider a cost-recovery model that allows committee representatives to balance the time and financial impact of their contributions. Without such measures, the sustainability of the committee system — and the ability to deliver timely, high-quality standards — will remain at risk.

In short, the back end of the process is where industry experiences the greatest frustration. Delays in drafting, inter-agency bottlenecks, under-resourced committees, and a rigid one-size-fits-all model leave industry waiting years for outcomes it urgently needs. Addressing these inefficiencies through faster adoption, tiered processes, and greater transparency would materially improve the effectiveness of the standards system.

GOVERNANCE, INTEGRITY AND COMMITTEE COMPOSITION

In general, AMCA and its members have not experienced concerns with the governance arrangements or the composition of Standards Australia committees. Our experience is that the committees we participate in are well structured, appropriately representative, and capable of producing balanced outcomes. However, AMCA believes that the real opportunity for improvement in governance is not in how committees are formed or operate internally, but in how their decisions are communicated after publication.

A recent example is the revision of AS 1668.2, where decisions were made to reduce specific ventilation rates. The internal report used to justify these changes was robust and demonstrated the strength of the committee's technical expertise and deliberation. Unfortunately, as the report remained "committee in confidence," practitioners outside the process could not access the evidence base that supported the final outcome. This lack of visibility challenges practitioners applying updated standards in the field. In discussion with one AMCA member, it was noted that although they wanted to adopt the 2024 revisions immediately, NCC 2022 continued referencing the earlier version. As a result, they could not apply the improvements directly and instead had to pursue a performance solution. While they could justify the use of the 2024 version, the absence of the committee's supporting reports made the process more difficult. If these reports had been available, they would have provided certifiers with clear evidence of the rationale for the changes, streamlining the approval process and reducing unnecessary friction.

Greater visibility of the evidence base and rationale used in drafting would therefore provide practitioners with stronger confidence in the outcomes, while also demonstrating the value and credibility of committee decision-making. Making this information available — while protecting commercially sensitive or confidential data where necessary — would allow the broader industry to see that changes are supported by sound evidence and rigorous debate. Apart from this need for improved transparency, AMCA considers the current governance and committee structure to be suitable and effective.

OTHER AREAS FOR INPUT

AMCA reiterates that the committee structure and approach to standards development are fundamentally suitable. The model of drawing on industry expertise through voluntary representation remains the right foundation, and we believe the governance framework provides the necessary balance of technical expertise and stakeholder input. The real opportunities for improvement lie not in restructuring committees but in how tools and technology can be leveraged to make the system more efficient, more accessible, and better aligned with industry evolution.

One clear area of opportunity is using digital tools and artificial intelligence to support drafting, review, and publication. While the technical expertise of committees must remain central, AI could be deployed to assist with consistency checking, cross-referencing, and drafting support. This would reduce the manual burden on committee members and enable faster progression of projects, without undermining the quality or rigour of the final standard. Beyond drafting, how standards are published and delivered should also be reconsidered. With the expanded use of AI in compliance checking and the growing adoption of Building Information Modelling (BIM), there is a strong case for publishing standards data in formats that can be directly integrated into digital tools.

The HVAC sector is already seeing the benefits of this integration through tools such as BIM-MEP-AUS, which use manufacturer data to support design, fabrication, and project delivery. These platforms allow contractors and designers to model systems more quickly and accurately while streamlining manufacturing and installation processes. If standards requirements — for example, duct thicknesses, tolerances, or minimum separation distances — were embedded directly into such digital tools, they could guide compliance at the design point and automatically flag potential non-conformances. This would save time during modelling and coordination and improve compliance outcomes throughout the life of a project.

To achieve this, Standards Australia should explore alternative publication formats that are machine-readable and capable of integration into digital environments. Making standards data available in structured formats would allow AI compliance engines and BIM platforms to reference requirements directly, creating a seamless link between design, construction, and regulatory compliance. Such an approach would provide significant productivity benefits to industry, while reinforcing the authority of Australian Standards as the definitive source of compliance information.

CONCLUSION

AMCA's engagement across multiple committees has reinforced our view that the foundations of the standards development system — particularly the committee structure, governance arrangements, and consensus-based approach — are fundamentally sound. Where the system falters is in its ability to deliver outcomes quickly enough to keep pace with industry needs.

For AMCA, the key priority for reform is improving turnaround times. Faster adoption and adaptation of international standards, clearer pathways for amendments and clarifications, better resourcing of drafting, and stronger transparency of committee decisions would all materially improve the system's responsiveness. Importantly, these improvements must also be balanced with sustainable support for the volunteers who underpin the committee process, ensuring their expertise continues to guide outcomes without becoming an unsustainable burden.

Standards are most valuable when they are both rigorous and timely. By addressing the systemic delays in drafting, review, and adoption, and by modernising how standards are published and integrated into digital tools, Standards Australia can deliver a process that better supports industry, regulators, and the community. AMCA stands ready to support this reform process and to contribute actively to building a standards system that is not only robust but also responsive to the needs of a rapidly evolving sector.