

SUBMISSION

Submission to the Productivity Commission

Submission to the National Water Reform Interim Update 2 consultation

24 July 2026

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 how to achieve sustainable solutions and advance prosperity.

ATSE welcomes the opportunity to respond to the Productivity Commission's Interim Assessment of the National Water Reform, and thanks the Commission for the invitation to participate in the two Stakeholder Working Group sessions held to date. This submission builds on ATSE's initial submission to this review (ATSE 2026a), focusing on cross-cutting actions to underpin and strengthen the National Water Initiative (NWI) that can be readily considered for implementation.

ATSE is not positioned to provide jurisdiction-specific evidence or progress reporting, and this submission instead responds to the framing and Terms of Reference of the Interim Assessment with sixteen proposed actions, grouped thematically below.

ATSE makes the following recommendations:

Recommendation 1: Make the new National Water Agreement (NWA) publicly available and subject to an open engagement process.

Recommendation 2: Underpin the National Water Initiative with an internationally recognised Environment | Social | Governance (ESG) framework.

Recommendation 3: Require water plans to respond directly to industry requirements and water-related trade-offs, in an integrated planning manner.

Recommendation 4: Require water plans to fully consider groundwater and surface water interactions, including modelling for future scenarios such as climate change and population growth.

Recommendation 5: Extend the National Water Initiative to include all water systems — including groundwater systems, overland floodplain systems, managed aquifers and purified recycled water — in terms of sustainable extraction levels.

Recommendation 6: Require specific and standard definitions, monitoring, modelling and reporting of groundwater | surface water connectivity, embedded within water plans.

Recommendation 7: Provide for metering of aquifer recharge and recovery within the National Water Initiative.

Recommendation 8: Reference the latest urban water regulatory adjustments where significant state policy changes have occurred within the National Water Initiative.

Recommendation 9: Ensure the National Water Initiative includes mechanisms that mitigate cyclic cost tensions and defines the terms used within economic regulation of water services, including but not limited to affordable, efficient and sustainable.

Recommendation 10: Ensure the National Water Initiative supports investment in urban water resilience and security for long-term sustainable water and sanitation outcomes, including to meet population growth, productivity, climate change, regulation, community expectations and research and development needs.

Recommendation 11: Call for an immediate and substantive uplift in investment in regional, rural and remote water and sanitation to close the gap within 10 years.

Recommendation 12: Require full national water quality and quantity monitoring and reporting for water and sanitation, covering all Australians, using a risk-based method.

Recommendation 13: Re-establish a National Water Commission.

Recommendation 14: Create mechanisms within the National Water Initiative for the ongoing sustainment of capacity and capability of the Australian water sector, including responsiveness to emerging water-dependent industries and new water systems.

Recommendation 15: Establish national water research criteria, monitoring and management within the National Water Initiative.

Aligning National Water Reform with the New National Water Agreement

ATSE supports linking the scope of this review, and its Terms of Reference, to the new National Water Agreement (NWA) as it progresses toward signing and implementation. Water reform is most effective where the two processes are considered together, rather than as separate, disconnected tracks. ATSE supports the propositions in Appendix C of the Interim Assessment for a genuine national reset through a renewed NWA, including making the current negotiation process and document publicly available as part of a substantially improved engagement process.

Recommendation 1: Make the new National Water Agreement (NWA) publicly available and subject to an open engagement process.

Developing frameworks to balance stakeholder interests

ATSE calls for an internationally recognised and independently applied Environment | Social | Governance (ESG) framework to underpin National Water Reform. Such a framework is an appropriate mechanism for advancing the relevant Interim Assessment criterion beyond its current status, while providing a transparent, cross-jurisdictional path for implementation.

An ESG framework is urgently needed to respond to the pressing issue of data centres, particularly their likely impact on water allocation and water quality outcomes. Water plans must respond to trade-off decisions across all areas of use, including industrial use, through an integrated planning approach.

Recommendations 2: Underpin the National Water Initiative with an internationally recognised Environment | Social | Governance (ESG) framework.

Recommendation 3: Require water plans to respond directly to industry requirements and water-related trade-offs, in an integrated planning manner.

Groundwater, connectivity and future water systems

ATSE acknowledges there is a long way to go in understanding groundwater — including its trade-offs, the impacts of climate change, and substantive groundwater and surface water interactions. Regional draft management plans remain variable and inconsistent in how they treat these interactions, and this gap will widen with climate change and population growth unless it becomes a near-term point of focus.

There also remains a gap in monitoring, measuring and reporting associated with groundwater systems, overland floodplain systems, and other water systems such as managed aquifers and purified recycled water. The NWI would benefit from current terms and definitions that are inclusive of these systems and consistently applied across all jurisdictions, and from mechanisms for adopting future water systems as they emerge, aligned to the Murray-Darling Basin Plan and its current review.

ATSE notes that scientific evidence continues to highlight gaps in the knowledge and management of physical connectivity between groundwater and surface water (Ross and Williams 2025). Further work is also needed on how aquifer storage and recovery is managed — including who holds entitlements to do what, and how this relates to groundwater entitlements and allocations more broadly (Dillon P, et al, 2026).

Aquifer recharge and recovery metering is yet to be rolled out under the Non-Urban Metering Framework, despite the clear benefit this would provide for measuring, monitoring, reporting and managing surface water and groundwater interactions.

Recommendation 4: Require water plans to fully consider groundwater and surface water interactions, including modelling for future scenarios such as climate change and population growth.

Recommendation 5: Extend the National Water Initiative to include all water systems — including groundwater systems, overland floodplain systems, managed aquifers and purified recycled water — in terms of sustainable extraction levels.

Recommendation 6: Require specific and standard definitions, monitoring, modelling and reporting of groundwater | surface water connectivity, embedded within water plans.

Recommendation 7: Provide for metering of aquifer recharge and recovery within the National Water Initiative.

Urban water reform and economic regulation

South Australia has recently announced major changes to its urban water regulatory setting, establishing a Gas and Water Trust (Government of South Australia 2026). The NWI should have a defined role in the terms of reference and settings within which such state-based trusts operate.

ATSE supports economic regulation that recognises the full cost pressures involved in providing a resilient and sustainable water and sanitation service. A national reset of water pricing and economic regulation is needed so that funding is appropriately aligned to the longevity of the assets being regulated, and the NWI should provide clear, nationally consistent definitions of an appropriate balance across cost pressures — including affordability, efficiency and sustainability — for long-term positive outcomes.

ATSE calls for transparent, risk-based investment in capital and sustainable operating costs for urban water and sanitation, applied at a level that provides for secure and resilient service provision. This is beyond ‘full cost recovery’ within a single economic regulatory timeframe, and instead requires a longer-term sustainable investment level that meets the needs of population growth, productivity, climate change, regulation, community expectations, and research and development (WSAA 2026).

Recommendation 8: Reference the latest urban water regulatory adjustments where significant state policy changes have occurred within the National Water Initiative.

Recommendation 9: Ensure the National Water Initiative includes mechanisms that mitigate cyclic cost tensions and defines the terms used within economic regulation of water services, including but not limited to affordable, efficient and sustainable.

Recommendation 10: Ensure the National Water Initiative supports investment in urban water resilience and security for long-term sustainable water and sanitation outcomes, including to meet population growth, productivity, climate change, regulation, community expectations and research and development needs.

Closing the water gap for regional, rural and remote communities

ATSE calls for immediate, transparent and risk-based investment in capital and sustainable operating costs for water and sanitation in regional, rural and remote areas, applied at a level that closes the service backlog within 10 years (ATSE 2024). All Australians deserve a level of service that provides safe drinking water and waste management for public, human and environmental health protection.

Improving the NPR benchmarks for service quality to small communities is welcomed by ATSE. While the Interim report rates this work as achieved continuous monitoring and improvement of drinking water for all communities should be an ongoing commitment. This must be founded on full national water quality reporting. Current statistics exclude water service providers with fewer than 10,000 connections, meaning approximately 8% of the Australian population — around two million people — fall outside routine reporting (WSAA 2022). Without ongoing reporting and effective monitoring, there is no clear governance pathway to improvement; a risk-based monitoring approach could make this achievable without overwhelming smaller communities.

Recent programs represent welcome steps, but their scope and continuity have been limited to date. Sustained, rather than intermittent, investment in regional, rural and remote communities would provide the most direct path to closing this gap within the proposed timeframe.

Recommendation 11: Call for an immediate and substantive uplift in investment in regional, rural and remote water and sanitation to close the gap within 10 years.

Recommendation 12: Require full national water quality and quantity monitoring and reporting for water and sanitation, covering all Australians, using a risk-based method.

Re-establishing governance through a National Water Commission

ATSE has consistently called for the re-establishment of an evolved, renewed National Water Commission (NWC) (ATSE 2026a). A re-established NWC would provide the governance, measurement, monitoring and transparent management arrangements needed to advance environmental and community outcomes, and is the mechanism by which the relevant Interim Assessment criterion could credibly be advanced to ‘achieved’. ATSE again asks that the Commission consider making an explicit statement on this matter as part of Appendix C of its final report.

Recommendations 13: Re-establish a National Water Commission.

Sustaining knowledge, capacity and capability

ATSE acknowledges the substantive capacity and capability of the Australian water sector, including welcome momentum in recognising and including Aboriginal and Torres Strait Islander knowledge. However, the programs identified in jurisdiction updates remain limited in scope and their effect has not yet been measured. Demonstrating and measuring this effect would help to substantiate progress against this criterion.

ATSE notes a risk to the future strength of the water sector's capacity and capability, given skilled labour shortages, workforce mobility, emerging skills needs, market pressures and reducing investment in research. The NWI must set a framework that supports capacity and capability building across the whole water sector nationally, underpinned by a nationally driven research agenda, and responsive to emerging water-dependent industries — such as energy systems and data centres — that will place new demands on the water sector workforce (ATSE 2026b, ATSE 2026c, ATSE 2026d).

Recommendation 14: Create mechanisms within the National Water Initiative for the ongoing sustainment of capacity and capability of the Australian water sector, including responsiveness to emerging water-dependent industries and new water systems.

Recommendation 15: Establish national water research criteria, monitoring and management within the National Water Initiative.

ATSE thanks the Productivity Commission for the opportunity to respond to the Interim Assessment of the National Water Reform 2026. ATSE remains a committed, independent source of evidence on this nationally important matter and welcomes the opportunity to continue to engage as the review progresses. For further information, please contact academypolicyteam@atse.org.au.

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