Submission: Draft Statement of Expectations for Data Centres and AI Infrastructure

Engineers Australia – Tasmania Division

Engineers Australia Tasmania Division has reviewed the draft Expectations and recommends nine changes to make them measurable, consistent and engineering-led.

To	Building Tasmania, via engage.building.tas.gov.au
Consultation	Draft Tasmanian Government Statement of Expectations for Data Centres and AI Infrastructure (September 2026)
From	Engineers Australia, Tasmania Division Committee
Contact	Engineers Australia Tasmania - Tasmania@engineersaustralia.org.au
Closing date	11.59 pm, Monday 12 October 2026

About Engineers Australia

Engineers Australia is the national peak body for the engineering profession. The Tasmania Division represents members across civil, electrical, mechanical, environmental and ICT engineering, many of whom would design, assess, build and operate these facilities.

Data centres draw on the full range of engineering skills and disciplines. Their impacts on Tasmania's electricity network, hydro storages, water supply and landscape are determined by design decisions made long before a development application is lodged. Our submission focuses on how the Expectations can make sure those decisions are well evidenced, independently checked and verified in operation.

Summary of recommendations

1. **Define the scale threshold.** State the IT load (MW) or connection size above which the Expectations apply, aligned with the tiers proposed in the Commonwealth's September 2026 consultation paper (no national requirements below 30 MW, baseline requirements at 30–100 MW and more substantial requirements above 100 MW of network connection capacity), so "small-scale edge" is not left to interpretation.
2. **Assess energy and water together.** Require proponents to show the energy–water trade-off of their cooling choice, because in Tasmania's hydro-based system the two draw on the same rainfall.
3. **Ask for peak and hourly demand, not just annual averages.** Network, plant and storage capacity are set by the worst days, not the average year.
4. **Require independent verification of demand modelling.** Energy and water forecasts should be checked independently and validated against measured performance after commissioning.
5. **Make reporting a clear expectation.** Publish forecast versus actual energy, peak demand, water and PUE/WUE annually, in a common format.
6. **Add heat reuse, embodied carbon, refrigerants and end-of-life.** These are material engineering opportunities that the draft does not cover.
7. **Name the engineering workforce.** Build engineering graduates, cadets and professional development into the jobs and skills expectation, and require appropriately qualified engineers to design and certify critical systems.
8. **Strive for national consistency.** Tasmania should work with the Commonwealth, State and Territory Governments to achieve nationally consistent expectations, standards, approvals and public reporting for data centre development and operation.

9. **Set measurable environmental performance expectations.** Cover siting and biodiversity, additional renewable supply, back-up generation and local air quality, refrigerants, noise, thermal and water discharges, and climate resilience, each with evidence required at defined project stages.

General comments

Clear, early expectations give proponents and communities confidence, and the principle that proponents fund the generation, network and water infrastructure they need is sound. The draft is aligned with the Australian Government's March 2026 Expectations. The Commonwealth has also signalled it will legislate national minimum standards for large data centres that build on those Expectations. Tasmania's Expectations should align with those standards so they do not duplicate or conflict with them.

Consistent language

The document is described as non-statutory, yet Expectation 4 uses "must" and "required" while other sections use "expected" and "should". Proponents will read this as uneven. We suggest a short statement of how each term is used, and how the Government will test whether an expectation has been met (for example, through the OCG, connection agreements or permit conditions).

Scale threshold

The Scope excludes "small-scale edge or on-site enterprise facilities" but sets no threshold. An indicative trigger, such as IT load or maximum demand in MW aligned with the thresholds proposed in the Commonwealth's consultation paper *Getting it right: Building AI infrastructure that works for Australia* (September 2026), would remove ambiguity and let smaller operators plan with certainty. Expectations could also scale in tiers, consistent with the Commonwealth's proposed 30–100 MW and above-100 MW tiers, which draw on the Australian Energy Market Commission's (AEMC) draft access standards for large loads.

Energy and water are linked in Tasmania

The draft treats energy (Expectation 4) and water (Expectation 5) separately. For cooling, they are a trade-off. Evaporative cooling uses water to reduce electricity demand; dry cooling brings on-site water use near zero but needs more electricity, especially on hot days.

In Tasmania, that extra electricity is largely hydro generation, which also depends on rainfall. A prolonged dry period affects both water supply and hydro storages at the same time. We recommend proponents present their cooling choice as a combined energy–water assessment, tested against dry-year and extreme-heat scenarios, not two separate forecasts.

Responses to each expectation

1. Maximising benefits to Tasmania

The draft refers to apprentices, trainees, graduates and cadets, and to engagement with the University of Tasmania and TasTAFE. Engineering should be named explicitly. These facilities need electrical, mechanical, civil, fire, controls and ICT engineers through design, construction and decades of operation. The Commonwealth's consultation paper notes that electricians, engineers and HVAC technicians are already in short supply nationally, so a large project that relies on this pool without expanding it could draw labour away from sectors such as housing, energy, telecommunications and defence. Skills commitments are therefore part of social licence, not an add-on.

Practical commitments we suggest:

- Reporting on the engineering capability used in design and construction, including the extent of local engineering input.
- A community benefit commitment agreed before approval: the specific, lasting benefits the host community will receive (for example local training places or shared infrastructure), with

the amounts, timing and measures stated and reported against. Benefits should be additional to what the project must provide to manage its own impacts.

- Structured graduate and cadet placements, including rotations with local consultancies, councils and utilities. Small employers cannot justify these programs alone; a shared cohort model spreads the benefit.
- Support for continuing professional development and pathways to Chartered status for Tasmanian engineers working on these projects.
- Engagement with Engineers Australia and other industry bodies as part of the supplier and skills mapping in 1(c).

2. Early engagement with community and stakeholders

Early information should be quantified. Before lodging, proponents should publish the site, maximum electrical demand (MW), staging, cooling technology, forecast peak and annual water use and its source, back-up generation type, and expected noise at the nearest receptor. Plain-language summaries of these figures would help communities engage with the substance.

3. Engagement with Tasmanian Government

The draft nominates the OCG as the single coordination point. The OCG could also hold a standard information checklist (see Expectations 4 and 5) so every proponent provides comparable data to TasNetworks, Hydro Tasmania and TasWater from the outset.

4. Supporting Tasmania's energy system

The draft expects additionality and full recovery of connection and network costs. To make these testable, we recommend proponents provide:

- An hourly or half-hourly demand profile, maximum demand and staging, not just annual consumption.
- Demand under extreme-heat and dry-year conditions, since these set network and firming needs.
- A demand-flexibility commitment stated in MW and duration, so TasNetworks and AEMO can plan around it.
- Independent verification of the energy model. Good practice is to check the forecast against at least two other independent reference points and explain any differences.
- A plan for back-up generation testing and emissions, and the timeline to move from diesel to the renewable fuels listed in 4(c).

Additionality needs a Tasmanian definition. Tasmania's grid is already largely renewable, so matching a data centre's consumption with certificates from existing hydro generation would not bring on any new supply and could leave other customers competing for the same energy. The Commonwealth's consultation paper proposes obligations to retire renewable certificates with a growing share from new capacity, and asks how "new" capacity should be defined and whether use should be time-matched in certain periods. We recommend the Expectations define additional supply as new generation and storage that would not otherwise have been built, require that it be committed on a stated timeline relative to the facility's staged load, and require reporting of both location-based and market-based emissions. Because a large load can shift Tasmania's whole system, we also recommend an assessment of the effect on hydro storage management and on prices for other customers, not only on the proponent's own supply. The paper also proposes that data centres buying from state-owned operators could seek a modification to their renewable electricity obligation from the Australian Energy Regulator (AER). In Tasmania, where most supply is state-owned hydro generation, any such modification should be tested against the same additionality and hydro storage assessment.

Power usage effectiveness (PUE) is a useful efficiency measure, but it hides the absolute size of a large facility. It should be reported alongside maximum demand and annual consumption, never alone. A design PUE assumes ideal conditions, so it should always be paired with an operational PUE reported after commissioning.

5. Sustainable water usage

The draft requires project-specific forecasts. Maximum and average annual demand should be supplemented with peak-day demand, since supply and treatment capacity are sized for the worst day. Forecasts should use hourly local weather data and the combined energy–water assessment described above.

Water usage effectiveness (WUE) has known limits: it does not separate potable from recycled water, and it excludes water used in generation. Proponents should report water by source (potable, recycled, raw, groundwater, rainwater) and give priority to non-potable supply.

We recommend a nationally consistent hierarchy of water sources, with potable water as the last resort, as raised in the Commonwealth's consultation paper. The Expectations should also ask proponents to show:

- That the proposed use will not adversely affect local water security, drought resilience, environmental flows or existing water users such as irrigators, including in a dry year, having regard to Tasmania's *Risk Assessment for Climate Change 2024*.
- Operational resilience: what the facility will do if water supply is restricted during drought, such as a switch to closed-loop or dry cooling, and the electricity cost of doing so.
- Where recycled or non-potable supply is not reasonably available, a credible alternative, such as investment in recycled water infrastructure on an agreed timeline, or offsets within the same catchment, with the benefit measured and not assumed.
- The quality and temperature of any water discharged, and how it will be managed to protect receiving waters.
- Metering at the facility so water use by source can be verified and published.

6. Approval pathways

The draft relies on the existing RMPS. Planning authorities and the EPA will need technical capacity to assess energy, water, noise, heat, refrigerant and climate resilience claims. We recommend guidance for assessors on the information to request, and access to independent technical review for large proposals.

Locating near existing network and water capacity reduces the need for new infrastructure. Site selection should also account for climate resilience, including bushfire, flood, coastal hazards and projected rainfall.

7. Transparency and reporting

"Should consider publishing" is weak for infrastructure of this scale. We recommend an expectation to publish annually, in a common format: forecast versus actual energy use, maximum demand, PUE, water use by source, WUE, renewable energy matched, emissions (location-based and market-based), back-up generator run hours and emissions, noise monitoring results at agreed locations, complaints received and resolved, and local jobs and procurement. This data is not commercially sensitive at an aggregated level, and it is the only way to confirm that modelled performance has been achieved. Where a facility has not met a forecast, it should publish the variance, with an explanation and the corrective action taken.

Matters not covered in the draft

Heat reuse. Almost all electricity used by a data centre ends up as low-grade heat. Tasmania has potential users nearby, including aquaculture, greenhouse horticulture, food processing and building heating. We recommend proponents assess heat recovery and report why it was or was not adopted.

Embodied carbon and circular economy. The draft focuses on operational energy. Construction materials, and the regular replacement of IT hardware, carry significant embodied carbon and waste. Proponents should report embodied carbon and plan for hardware recovery, reuse and recycling, ideally through Tasmanian processors.

Refrigerants and other emissions from cooling. Many cooling systems use refrigerants with a high global warming potential, and leaks add to a facility's emissions even when its electricity is renewable. Proponents should state the refrigerant, its global warming potential, the leak detection and maintenance regime, and the lower-impact alternatives considered.

Decommissioning and site rehabilitation. A data centre may operate for decades, but its servers turn over every few years and the building may outlive its first use. Proponents should set out how the site will be decommissioned or repurposed, and who is accountable for the cost.

Engineering assurance. Critical electrical, mechanical, fire and structural systems should be designed and certified by appropriately qualified and experienced engineers, such as those holding Chartered status or registration on the National Engineering Register. Independent peer review is warranted for the demand models that underpin network, generation and water decisions.

Editorial corrections

Page	Section	Issue	Suggested fix
5	Expectations table	Objective for Expectation 3, "Delivery of commercially viable projects", reads as a Government outcome, not an expectation of proponents	Reword, e.g. "Coordinated engagement to confirm commercial viability"
9	3. OCG assistance	Second bullet merges two items ("…potential local suppliers mapping and coordinating…")	Split into two bullets
12	4(f)	"so that there be no net cost"	"so that there is no net cost"
13	5	"The Water Management Act 1999" italicises "The"	"The Water Management Act 1999" with only the Act title italicised
14	6	"Implement" capitalised mid-sentence; "commonwealth" lower case	"implement"; "Commonwealth"
Throughout	4 vs other sections	Mix of "must", "required", "expected" and "should"	Define terms (see General comments)

Ongoing engagement

Engineers Australia Tasmania Division is available to discuss the technical matters in this submission and to provide engineering input to the next stage of the Expectations. We can convene technical input from members in energy, water, building services and ICT.

Engineers Australia Tasmania Division
David Ewers
President, Engineers Australia Tasmania Division
Tasmania@engineersaustralia.org.au