Firmus Technologies: Submission on the Expectations for Data Centres and AI Infrastructure Developers

1. What practical commitments would best support Tasmanian jobs, skills, local procurement and lasting community benefits?

Firmus Technologies is an Australian technology company founded in Launceston in 2019. We design, build, own and operate purpose-built AI factories combining high-density computing with specialised power and liquid-cooling systems. Our technology was developed and tested in Tasmania, and Launceston remains an important research, development and operational base for the company.

Firmus supports the draft expectation that proponents should create lasting benefits through Tasmanian jobs, skills development, local procurement and community investment.

For major projects, proponents should set clear commitments covering local procurement, apprenticeships and training, partnerships with education and research institutions, and pathways into ongoing technical and operational roles. These commitments should reflect the nature and scale of each project and recognise that construction and operational workforces have different skills and employment profiles. There is also an opportunity to build Tasmania's broader capability to apply AI to research, industry and problem-solving. That capability will develop over time, as organisations build skills, experience and confidence in using AI.

Firmus is committed to leaving a legacy and believes local communities, as part of advancing AI infrastructure, should benefit directly rather than feel adversely impacted. To build community trust and acceptance, Firmus will engage communities early to explain how AI infrastructure will affect them, how it considers feedback, and how local ideas can help Firmus identify priorities and deliver tangible, long-lasting social outcomes through partnerships and targeted community investment programs.

2. What opportunities could data centre and AI infrastructure investment create for Tasmania's digital ecosystem, research and technology enabled industries?

Firmus sees a clear opportunity for data centre and AI infrastructure investment to strengthen Tasmania's broader digital ecosystem. We support the draft expectation that this investment should contribute to Tasmania's digital capability, and believe the opportunity extends well beyond facilities themselves.

Large-scale AI infrastructure can provide researchers, businesses and public institutions with greater access to advanced computing capability, supporting new applications in fields such as health, science, engineering and advanced industry. Over time, this can help build the skills and experience needed to apply AI effectively to Tasmanian research and problem-solving.

AI infrastructure investment can also support enabling infrastructure that benefits the wider economy. Firmus is already underwriting new digital connectivity through the Bernacchi-1 subsea fibre cable, which is intended to add capacity and route diversity between Tasmania and the mainland. Major projects can also help strengthen telecommunications, energy and other infrastructure that supports technology-enabled industries.

A stronger local AI infrastructure value chain could also retain more technical capability and economic value in Tasmania and Australia, including through design, fabrication, engineering, operations and service delivery.

There is also an opportunity to build stronger links between infrastructure providers, universities, research organisations, training providers and local businesses. These relationships can support new research partnerships, technology adoption and the growth of complementary businesses and supply chains, helping create a more durable technology ecosystem in Tasmania. Firmus supports the emphasis on collaboration with industry, research organisations and education providers in the draft expectations, and believes these partnerships can and should be used to build applied AI capability in Tasmania.

3. What information should proponents provide early, and which stakeholders should be engaged, to inform community understanding and project design?

Like other major infrastructure projects, AI infrastructure development involves site selection, early feasibility studies, design, planning and delivery before the infrastructure is fully operational.

Firmus believes proponents should clearly explain, at each stage, how stakeholder and community engagement may inform decision-making and provide accurate information early, so communities and stakeholders can understand how they can contribute before key decisions are determined.

This should include the proposed location and scale of the development, indicative construction and operating timeframes, forecast employment, energy and water requirements, transport and infrastructure needs, likely environmental and amenity impacts, and the measures being considered to manage those impacts. Where information is still being developed, proponents should be clear about what is known, what remains subject to further assessment or design, and when more detailed information will be available.

Firmus supports the draft expectation that proponents engage early with communities, including the Tasmanian Aboriginal community, and other stakeholders throughout the development application process. Early engagement should include local councils, relevant regulators and infrastructure providers, local businesses and supplier networks, and education and research institutions where there are potential skills, research or innovation opportunities. The mix of stakeholders should reflect the location, scale and likely impacts of each project.

Where opportunities exist, engagement should inform project design, not simply explain decisions already made, and provide practical opportunities for stakeholders to raise concerns, identify local priorities, suggest improvements, and explain how that feedback has influenced the project as it develops.

4. How can government assist proponents in navigating existing approval, infrastructure and commercial processes?

Government can assist proponents by providing clear, consistent and coordinated pathways through existing approval, infrastructure and commercial processes.

Firmus supports the proposed role of the Office of the Coordinator-General as a central point of coordination across government, regulators and infrastructure providers. This can help proponents understand early which processes apply, what information will be required, the expected sequencing of decisions and which agencies need to be engaged.

Clarity and consistency are particularly important where projects interact with multiple approval and infrastructure processes. Government should provide clear guidance, consistent information requirements and timely coordination between agencies, without creating new or duplicative approval pathways.

Processes should also be applied proportionately to the actual scale, characteristics and impacts of each project. Different technologies, locations and operating models can create materially different impacts on energy, water, infrastructure and communities. Assessment should therefore focus on those actual impacts rather than apply assumptions based simply on project type.

Early coordination between proponents, government, regulators and infrastructure providers can also help identify constraints, information requirements and commercial issues before significant design decisions are locked in.

5. What commercial arrangements, demand-flexibility measures and technologies can support additional energy supply while protecting system security and existing customers?

Large new electricity users should facilitate the development of the additional generation and network capacity needed to serve them, while protecting system security and existing customers.

Commercial arrangements should enable new renewable generation in Tasmania, including wind and/or solar, and provide for firming where required, including through existing firming services from Hydro Tasmania where these are available on commercial terms.

Where there is a timing gap between new load and supporting generation, proponents should demonstrate how that gap will be managed. If proponents have underwritten new renewable generation to support their load, demand during this transition period may be supplied from existing generation where spare capacity is available, until additional renewable generation is progressively brought online to meet demand over time. Any interim use of existing generation should be on commercial terms and should not compromise Tasmania's energy security or grid reliability.

Demand flexibility should form part of these arrangements, both in the transition period and the longer term. Large AI infrastructure can and should be designed to reduce or shift electricity use during periods of grid stress, helping manage peak demand, support energy security, and maintain system reliability.

The draft expectations appropriately recognise both the role of commercially available firming and the need for proponents to be flexible in their electricity use. Technologies that can support this include on-site batteries and other storage, grid-responsive load management, and back-up energy systems that can contribute to project resilience and, where practical, wider system needs.

The appropriate mix should depend on the characteristics of the project and Tasmania's energy system rather than be prescribed uniformly. The overall principle should be that major new loads contribute to additional supply, are sufficiently firmed, remain flexible in how they use electricity, meet the costs attributable to their development, and do not compromise Tasmania's energy security, reliability or affordability for existing customers.

Proponents should also cover connection and project-specific network costs attributable to their developments, so those costs are not shifted to existing customers.

6. What practical information should proponents provide to support coordinated network and generation planning?

Proponents should provide network and generation planners with clear, timely information about both the scale of their proposed electricity demand and how that demand is expected to behave in practice.

This should include proposed connection capacity, forecast average and peak demand, expected load profile, project staging and timing, likely changes in demand as the facility scales, and the extent to which demand will be reduced or shifted when required. Proponents should also provide information about their plans for on-site batteries, back-up generation and other systems that may affect how the project interacts with the grid.

Proponents should be expected to set out, at an early stage, how their electricity demand will be matched by generation and firming over time, providing enough time and enough detail for network and generation planners to assess whether the proposed arrangements are credible and appropriately sequenced. Where key commercial arrangements are not yet finalised, proponents should identify the assumptions being used and update network and generation planners as those arrangements develop.

The draft expectations appropriately call for sufficient and timely information to allow TasNetworks to assess system, infrastructure and potential customer-pricing impacts, alongside early engagement on project location and available network capacity.

In practice, that information should be updated as projects move from concept through design and delivery, so planning is based on the best available picture of future demand and system requirements, rather than a single early estimate.

7. What technologies, siting practices and commercial arrangements can minimise water use and protect existing users and water security?

Water requirements should be assessed project by project, because they vary materially according to cooling technology, climate, facility design and location.

Proponents should be required, through existing assessment, approval and commercial arrangements, to demonstrate how their project design minimises water use from the outset, including through efficient cooling technologies, alternative water sources and other practical measures where appropriate.

Firmus uses direct-to-chip liquid cooling with heat rejected primarily through dry-mode operation, with water-assisted cooling used only when operating conditions require it. On-site rainwater capture, storage and the use of recycled or other non-potable water can further reduce demand on public water supplies. Firmus's Tasmanian projects demonstrate that the resulting water profile can vary substantially between sites, reinforcing the need for project-specific assessment rather than uniform assumptions.

Siting is equally important. Projects should be located where their water supply and wastewater infrastructure requirements can be accommodated without adversely affecting existing users. As with energy use, proponents should engage with water providers early enough for those impacts and infrastructure requirements to be properly assessed.

Commercial arrangements should ensure proponents meet the infrastructure and service costs attributable to their developments, rather than shifting those costs or risks to existing customers. The draft expectations appropriately combine this principle with a requirement to minimise water use and protect water security for other users.

Proponents should also provide clear forecasts of average and peak water demand, the expected balance between potable and alternative water sources, cooling requirements and wastewater volumes, and should update this information as project design develops. The overall objective should be to minimise demand on public water supplies while maintaining sufficient resilience during periods of low rainfall or water disruption.

8. How can proponents and government improve early coordination and provide clearer information within existing approval pathways?

Early coordination would benefit from proponents, government agencies, government business enterprises (GBEs), regulators and infrastructure providers agreeing at the outset on the relevant approval pathways, the information required for each, and how those processes will interact.

Firmus supports the draft expectation that proponents engage early with the Office of the Coordinator-General, which should act as the central coordination point for engagement with relevant planning authorities, regulators and infrastructure providers.

In practice government, through the Office of the Coordinator-General, could improve coordination further by providing proponents with a clear, consolidated roadmap of the approvals and referrals likely to apply, the responsible agencies, GBEs, key decision points, expected sequencing and indicative information requirements.

With this guidance, proponents will then be able to provide complete, consistent information for communities and across agencies, rather than approaching each approval or infrastructure process in isolation. Where information changes, those changes should be communicated promptly so that planning, environmental, energy, water and other assessments remain aligned.

The objective should be better and more consistent coordination within existing processes, not additional layers of approval. Clear roles, consistent information requirements and early issue identification can reduce duplication, avoid late surprises and give both proponents and communities greater confidence in how projects are assessed.

9. What project information would best support meaningful early community engagement? (You may wish to comment on project specifics, energy, transport, ports, water, digital connectivity, land supply, or infrastructure costs and benefits.)

Meaningful early engagement depends on communities having clear, practical information about what a project will involve, how it is expected to affect them, and what benefits it could create.

Proponents should provide plain-English information on the proposed location, scale and design of the project; construction and operating timeframes; expected employment; energy and water requirements; transport and freight movements; use of ports or other major infrastructure; digital connectivity; land requirements; and likely environmental and amenity impacts. Where infrastructure upgrades are required, communities should also be told who will fund them and what broader public benefits the upgrade may create.

Information should distinguish clearly between what is known, what is still being developed and what is subject to assessment or commercial negotiation. Where impacts cannot yet be precisely quantified, proponents should explain the range being considered and when more precise information is expected.

Early community engagement should explain how proponents intend to meet relevant Commonwealth and Tasmanian energy and water legislative requirements, regulatory obligations and policy expectations. This should include the project's proposed energy and water plans, the approvals and commercial arrangements expected to apply, and the measures proposed to manage demand, supply, infrastructure and resource security. Proponents should be clear about which elements are confirmed, which remain subject to assessment or negotiation, and how compliance will be demonstrated as the project develops.

The draft expectations appropriately call for ongoing information about project timeframes, impacts, mitigation measures and emerging opportunities to be provided. In practice, that information should be presented in a form that allows communities to understand the issues most relevant to them, rather than relying on technical documents alone.

Engagement should also explain the trade-offs associated with project design. For example, communities should understand how the site was selected and how advanced cooling technology, energy supply, transport routes, or infrastructure investment will affect local impacts and benefits. This gives people a meaningful basis to raise concerns, identify priorities and influence project development.

10. Noting commercial confidentiality, privacy, cyber security and national security considerations, what non-sensitive information could proponents reasonably make public to build community confidence?

Proponents should make enough non-sensitive information public to allow communities to understand a project's scale, impacts, benefits and performance over time.

This should include forecast and actual energy and water use; energy and water efficiency; the broad approach to energy supply, demand flexibility and water management; employment and local procurement outcomes; environmental performance; delivery of community commitments; and progress against major infrastructure and project milestones. Where proponents have made measurable public commitments, reporting should show clearly whether those commitments are being met.

Firmus supports the draft expectation that proponents publish non-sensitive information on forecast and actual resource use, employment and local procurement, environmental performance and delivery of community commitments. We believe this information is most useful when it is reported consistently over time, so communities can compare actual performance with earlier forecasts and commitments.

Transparency should not require the disclosure of commercially sensitive contracts, customer information, detailed security arrangements, personal information or information that could create cyber or national security risks. However, confidentiality should only apply to genuinely sensitive information, not as a reason to withhold information about a project's broader impacts and performance.

Firmus supports the Government establishing a consistent reporting framework for major projects, so proponents report against comparable measures, such as water, energy and community benefits, and the general public know what information to expect.

11. Do you have any other comments?

Firmus supports the overall direction of the draft expectations. Tasmania has an opportunity to attract substantial investment in AI and data infrastructure while maintaining high standards for resource use, infrastructure planning, transparency and community benefit.

The framework should maintain consistent and rigorous standards while recognising that different technologies, locations and operating models can create materially different energy, water, infrastructure and community impacts.

Expectations should also preserve flexibility as the sector develops. Technologies, commercial models and the ways AI is applied in research and industry will continue to evolve. Policy should set clear outcomes and responsibilities, while allowing proponents, government and communities to determine the most effective way to achieve them.

Firmus supports the continued use of Tasmania's existing planning, environmental and infrastructure processes for data centre and AI infrastructure. Stronger coordination, clearer information requirements and transparent reporting will improve outcomes without creating additional or duplicative approval pathways.

With these settings in place, Tasmania can support responsible investment while making sure major projects contribute to additional infrastructure, protect existing users, build local capability and deliver lasting benefits for Tasmanians.