Firmus Technologies

Submission to the Inquiry into AI Data Centres in Tasmania

1. Introduction and executive summary

There is a clear, immediate opportunity for Tasmania to capture the benefits of AI infrastructure while setting high standards for resource use, environmental performance, transparency and community benefit.

As the sector grows, the policy challenge is to assess projects on their actual characteristics and impacts, so energy, water and other public resources are used responsibly, and communities can see both how impacts are being managed and what lasting benefits projects will deliver. Those standards should also recognise that not all AI and data infrastructure has the same resource profile. Differences in technology, cooling, energy efficiency and grid participation can materially affect a facility's impact, and policy should distinguish between projects based on actual performance.

Firmus 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, with Launceston remaining an important research, development and operational base.

We support strong, transparent standards for AI infrastructure and the Tasmanian Government's draft Expectations for Data Centres and AI Infrastructure Developers as a strong foundation. Those standards should recognise that different technologies and operating models can produce materially different energy, water and environmental outcomes. Projects should therefore be assessed on their actual performance and contribution.

This submission responds to all seven Terms of Reference. It proposes practical settings to assess AI and data infrastructure according to their actual impacts and performance, set proportionate energy and water standards, strengthen transparency and community engagement, deliver tangible Tasmanian benefit, and provide effective Parliamentary oversight while retaining established regulatory processes.

2. Assessing the impacts of AI and data infrastructure

This section responds to Terms of Reference 1, 2, 4 and 7, focusing on the protection of public resources and the environment, the recognition of specific AI and data infrastructure impacts within Tasmania's Resource Management and Planning System, the transparent disclosure of resource use, and related policy settings.

Tasmania's policy and planning framework should apply rigorous scrutiny to all AI and data infrastructure projects, while recognising that differences in technology materially affect resource use, infrastructure requirements and environmental impacts.

Historically, conventional data centres store, process and move data across a broad range of workloads. AI factories are designed around high-density accelerated computing, with power, cooling, networking and building systems configured for the needs of the computing hardware. These differences can materially affect electricity demand, cooling requirements, water use and the way facilities interact with the grid.

For Firmus, this distinction is practical. Our AI factories use high-density graphics processing unit (GPU) computing, direct-to-chip liquid cooling and grid-responsive power management. The technology was

developed and tested in Tasmania, with Launceston serving as Firmus' research and development (R&D) base since 2019.

Firmus supports the continued use of Tasmania's existing Resource Management and Planning System as the approvals backbone for current and future AI infrastructure. Within that framework, projects should be assessed on their actual impacts and resource requirements. Clear definitions and guidance can help decision-makers identify the characteristics that matter, including energy demand, water use, cooling technology and grid interaction.

This approach would recognise genuine differences between forms of digital infrastructure, while maintaining a clear focus on assessing projects on the basis of their real impacts and benefits.

3. AI infrastructure should strengthen Tasmania's energy and water systems

This section responds to Terms of Reference 1, 2, 4 and 6, focusing on protection of public resources, the assessment and disclosure of energy and water impacts, and the contribution AI infrastructure can make to Tasmania's energy system and communities.

Projects that create large new electricity loads should support the systems they depend on, irrespective of which sector they are in. This means contributing to additional generation and system reliability, participating flexibly in the grid and meeting the cost of infrastructure required by their development.

Responsible development – including AI infrastructure development – should also minimise water demand through design and reduce pressure on public water supplies through rainwater capture, on-site storage and alternative non-potable sources where feasible.

Energy

Our own experience demonstrates how these principles can be applied in practice. Firmus' Australian Energy Policy sets measurable commitments for the way we use and procure electricity. New greenfield AI factories target a Power Usage Effectiveness (PUE) of 1.15 or lower. We also commit to reducing or shifting electricity use during periods of grid stress, supporting new renewable generation and firming where required, procuring energy on commercial terms, and funding the project-specific transmission and connection infrastructure our facilities require.

Across our Tasmanian portfolio, we expect to contract for approximately 444 MW of electricity capacity at full build. The sites are not expected to use that full amount continuously. On average, we expect them to operate at around 85 per cent of contracted capacity, equivalent to average operating demand of approximately 377 MW and annual electricity consumption of around 3.3 TWh.

Our published Australian Energy Policy establishes benchmarks for supporting new generation and firming. It includes support for at least 2 MW of new renewable generation for every 1 MW of contracted capacity. It also provides for at least 2.5 MWh of new firming for every 1 MW of contracted load where the relevant government energy body identifies a shortfall in dispatchable renewable capacity. The final volumes and technology mix for Tasmania will be determined through our commercial energy arrangements and adapted to the specific characteristics of Tasmania's electricity system.

Those Tasmanian arrangements have not yet been finalised. Tasmania's hydro-based system may require a different mix of new generation and firming from jurisdictions that rely primarily on standalone battery storage. This may include a greater contribution from new generation and hydro upgrades capable of providing both additional generation and firming. The objective remains that new large-scale demand should support the additional energy supply and system reliability needed to serve it.

The application of these principles can vary by project and location. The Bell Bay Industrial Precinct project is proposed to connect directly to Tasmania's 220 kV high-voltage transmission network. Electricity would be purchased through commercial agreements with no subsidised or preferential tariffs, and the facility is designed to rapidly reduce or shift its electricity demand when required.

The broader policy principle is straightforward: large new electricity users should meet their own connection costs, support the additional energy infrastructure needed to serve them, and manage demand in ways that contribute to network reliability.

Water

The amount of water consumed by individual AI factories and data infrastructure varies significantly according to technology, climate, facility design and operating conditions. Responsible projects should minimise that demand through design and reduce pressure on public water supplies wherever practicable.

Our AI factories use direct-to-chip liquid cooling, with heat rejected primarily through dry-mode operation. Water-assisted cooling is used only when temperature and operating conditions require it. Our Australian Water Stewardship Policy also supports on-site storage, the use of alternative non-potable water sources where viable, and monitoring through Water Usage Effectiveness (WUE), which measures water consumed relative to the computing energy delivered.

Our Tasmanian projects illustrate how technology, climate and site conditions can produce different water outcomes within the same operating model.

Tasmania's climate provides a significant advantage for this cooling model. Current modelling at our Launceston campus indicates dry-mode operation for around 97 to 99 per cent of operating hours. Water-assisted cooling is expected to operate for fewer than 125 hours a year, with annual water consumption for cooling estimated at around 3.4 million litres, equivalent to the annual use of about 20 Tasmanian households.

The proposed facility in the Bell Bay Industrial Precinct is expected to require around 18,600 kL of water annually, which includes approximately 14,400 kL for cooling and 4,200 kL for facility and fire-related use. The facility is expected to capture and reuse approximately 10,000 kL of rainwater each year, reducing cooling-water demand from public supplies by around 69 per cent and meeting more than half of the facility's total annual water demand. Water-assisted cooling is expected to be required for around 10 days each year.

At Wesley Vale, current modelling indicates around 700 kL of mains water use annually, approximately 1,000 kL of rainwater capture and around 10 days of water-assisted cooling each year. The expected volume of captured rainwater is greater than the facility's average annual water requirement.

These different outcomes reinforce the case for project-specific assessment and disclosure. They demonstrate that significant reductions are achievable through technology, site selection and design. Tasmanian approvals and reporting frameworks should require proponents to provide clear forecast and actual energy and water data, so project performance can be assessed transparently in both the approvals and operational phases.

4. Transparency, consultation and accountability should underpin community confidence

This section responds to Terms of Reference 3, 4, 5 and 6, focusing on public disclosure of resource use, opportunities for community consultation, Parliamentary oversight and accountability, and delivery of tangible benefits to Tasmanians.

Firmus supports consistent, transparent public reporting requirements for AI and data infrastructure. At a minimum, reporting should cover energy and water use, resource efficiency, environmental performance, renewable energy and grid commitments, employment and local procurement outcomes, and delivery of community benefits.

The Tasmanian Government's draft Statement of Expectations already points in this direction. It encourages proponents to publish non-sensitive information on forecast and actual energy and water use, employment and local procurement, environmental performance and delivery of community benefits, subject to legitimate commercial confidentiality, privacy, cyber security and national security considerations.

Firmus would encourage the adoption of a consistent reporting framework for AI and data infrastructure projects through regulation or legislation. Our own Australian Energy Policy commits us to publish an annual report addressing each of its commitments and principles, including independent third-party verification where a commitment requires it.

Mandated reporting standards would give government, Parliament and communities a clearer basis for assessing whether projects align with proponents' forecasts and commitments over time.

Community engagement

Meaningful consultation should begin early and continue through development, construction and operation.

Firmus has applied what we learned from the early phases of the Bell Bay Industrial Precinct development to strengthen our approach to community engagement. Our current model includes community drop-in sessions, webinars, project updates, surveys, engagement with local businesses and suppliers, and online community information. For the Bell Bay Industrial Precinct project, for example, a public webinar has been recorded and made available online through the Firmus Community Hub, and the community has been invited to attend drop-in sessions and provide feedback through surveys.

More than information, engagement should give communities practical opportunities to raise concerns, identify local priorities and understand how their feedback has influenced project decisions. That engagement should continue after planning approval, when communities can see how commitments are being delivered in practice.

Government and independent authorities also have a role in making regulatory scrutiny understandable and visible. Beyond proponent transparency, public confidence also depends on greater visibility of the processes and outcomes of independent assessment already undertaken by regulators, network bodies and utilities. Hydro Tasmania's public information on the Firmus proposal provides a useful example, explaining its role, the assessment underway, the key questions being considered and the limits of what can be disclosed while commercial negotiations remain confidential.

Parliamentary oversight

Parliamentary oversight and project approval serve different functions. We believe that the assessment of individual proposals should remain with the existing planning, environmental and infrastructure bodies that have the relevant expertise and statutory responsibilities.

Parliament can provide effective oversight through regular, transparent reporting at the sector level. This could include information on major approvals, resource allocation including aggregate and individual project energy and water use, compliance with approval conditions, delivery of infrastructure commitments, and employment, procurement and community outcomes.

This approach would give Parliament and the community a clear view of how the sector is performing, without adding a separate approval pathway to Tasmania's existing regulatory framework.

5. AI infrastructure should deliver lasting benefits for Tasmania

This section responds to Terms of Reference 5, 6 and 7, focusing on the tangible benefits AI and data infrastructure should deliver to Tasmanian communities and the broader economy.

The benefits of AI infrastructure should be measured broadly. They include construction and ongoing jobs, skills and training, opportunities for local suppliers, investment in renewable energy and transmission, improved digital infrastructure, contributions through rates and taxes, community investment and the development of longer-term technical capability in Tasmania.

Our experience in Tasmania demonstrates the range of benefits. Firmus was founded in Launceston in 2019 and has developed and tested its AI factory technology in Tasmania since its inception. Our Tasmanian workforce spans engineering, construction, operations, software and R&D, as well as multiple supporting roles. Currently, around 35 of Firmus' employees are based in Tasmania.

Current and proposed developments would increase that employment base significantly. The Wesley Vale plans anticipate more than 70 construction and trade roles during delivery and more than 20 ongoing full-time roles once the site is operational, as well as on-site training opportunities. The Bell Bay Industrial Precinct project estimate is for more than 380 construction roles and around 115 ongoing operational roles across technology, engineering, energy management, maintenance, security and administration.

The benefits of AI projects can also extend beyond direct employment. Firmus funds project-specific transmission and connection infrastructure, supports new renewable generation and purchases electricity on commercial terms. We are also underwriting new digital infrastructure, including the Bernacchi-1 subsea fibre cable linking Tasmania with mainland Australia. Current analysis indicates the cable will add more than 60 terabits per second of capacity and provide new route diversity to Melbourne and Sydney.

Preliminary analysis by Oxford Economics Australia also indicates that the scale of Firmus' proposed Tasmanian investment could generate substantial wider economic benefits. Modelling indicates a cumulative contribution to gross state product of $12.8 billion from the Launceston facility from the 2026 to 2035 financial years, with an average of approximately 1,360 jobs supported during operations across direct, supply-chain and induced employment.

Firmus also believes that community benefit should be deliberate and ongoing. We are developing a Local Futures Program that brings together community partnerships, grants and employee volunteering. The proposed model includes community input into funding priorities and reporting on social impact.

The community should rightly expect AI and data infrastructure projects to deliver tangible benefits across their full lifecycle. Proponents should be expected to demonstrate how their investment will create lasting employment and skills, strengthen Tasmanian supply chains and infrastructure, contribute to the state and communities that host them, and support locally identified priorities.

6. Policy settings to realise the opportunity

Firmus proposes six practical policy actions to help Tasmania manage the impacts of AI and data infrastructure projects, while capturing more of the economic, strategic and regional value they create. We recommend that Tasmania:

- Apply a consistent, rigorous assessment framework to AI and data infrastructure projects, and assess individual projects on their actual impacts, resource requirements and benefits.
  Terms of Reference 1, 2 and 7
- Establish proportionate standards for energy, water and infrastructure impacts, including clear expectations for the efficient use of resources, minimisation of water demand and responsibility for project-specific infrastructure costs.
  Terms of Reference 1, 2 and 4
- Require consistent public reporting for AI and data infrastructure projects on energy and water use, resource efficiency, environmental performance, employment and local procurement, and the delivery of community benefits, subject to legitimate confidentiality, privacy and security protections.
  Terms of Reference 3, 4 and 6
- Require projects that create large new electricity loads to support additional generation and system reliability, manage demand flexibly and meet the network and connection costs attributable to their development, irrespective of sector.
  Terms of Reference 1, 3 and 6
- Require early and ongoing community engagement for projects and clear commitments to tangible Tasmanian benefits, including employment, skills, local procurement, infrastructure investment and community benefit.
  Terms of Reference 5 and 6
- Provide Parliamentary oversight through transparent reporting on the development, resource allocation and performance of the sector, while continuing assessment and approval of individual projects within Tasmania's existing regulatory processes.
  Terms of Reference 2, 3 and 4

7. Conclusion

Tasmania has an opportunity to attract substantial AI infrastructure investment while maintaining high standards for resource use, environmental performance, transparency and community benefit.

Responsible projects should demonstrate efficient energy and water use, contribute to the reliability of the electricity network, meet the infrastructure costs they create, report transparently on their performance, engage communities throughout the life of the project and deliver lasting benefits for Tasmanians.

Firmus supports the implementation of a Tasmanian policy and regulatory framework that sets these expectations clearly, so that projects can be assessed on their specific impacts, performance and contribution.

With these settings in place, Tasmania can lead the way in establishing a strong model for responsible AI infrastructure development that protects public resources while supporting investment, jobs, skills and long-term technological capability.

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14 September 2026

Kate McLaughlin
General Manager Corporate Communications
Firmus Technologies

Independent assessment of the economic contribution of Firmus' Australian AI Factory rollout: scope of work and preliminary findings

Dear Kate,

Firmus Technologies has engaged Oxford Economics Australia to prepare an independent assessment of the economic contribution of its Australian AI Factory rollout. This letter has been prepared at the request of Firmus for inclusion alongside its submissions to parliamentary and state inquiries. It sets out the scope of the engagement, the current status of the work, preliminary observations on the Firmus model, and a high-level summary of the preliminary findings relating to Tasmania.

SCOPE OF THE ENGAGEMENT

The study quantifies the economic contribution of Firmus' Australian activities across three areas:

- the contribution of existing and committed Tasmanian operations to gross state product (GSP), employment, labour income, supply chains and government revenue, across the construction, ramp-up and steady-state operating phases;
- the energy, infrastructure and community outcomes associated with those operations, covering local employment, regional suppliers, renewable generation and firming capacity, and network infrastructure, including a case study of the Launceston development; and
- the national economic contribution of committed developments and the future pipeline, together with the enabling conditions on which that contribution depends, being energy availability, infrastructure readiness, workforce capability and investment conditions.

The assessment applies an input-output framework that measures direct contribution from Firmus' own construction and operating activities, indirect contribution supported through its procurement of goods and services, and induced contribution arising as employees of Firmus and its suppliers spend their earnings. The modelling covers the period FY26 to FY35 and uses Australian Bureau of Statistics input-output tables regionalised to Tasmania using location quotients derived from state employment data. Firmus has provided site-level capital and operating expenditure, procurement, capacity and pipeline data, which has been combined with official statistics and Oxford Economics Australia's own forecasts and modelling.

STATUS OF THE WORK

The engagement remains underway. The findings summarised below are preliminary and are subject to further review, refinement of assumptions and finalisation. No final report has been completed, issued or released, and the estimates presented should be read as indicative rather than final. Oxford Economics Australia is continuing to develop and finalise the analysis, and the estimates may change as that work is completed.

PRELIMINARY OBSERVATIONS ON THE FIRMUS AI FACTORY MODEL

Two observations arise from the broader assessment and are relevant to the matters before the inquiries. Both concern the Firmus AI factory model rather than AI infrastructure in general, and both are qualitative, drawn from the same preliminary analysis and subject to the same qualifications as above.

1. Retention of economic value onshore.

Firmus designs, builds, owns and operates its AI factories, which places more of the AI infrastructure value chain in Australia than the prevailing model, under which a facility is built locally and leased to an offshore operator that owns the compute and sells the services. The preliminary analysis indicates that the Firmus build-own-operate model locates three stages of the value chain onshore that a leasing arrangement places offshore: the advanced manufacturing of major electrical and cooling systems, the ownership of the computing hardware, and the delivery of AI cloud services from Australia. The analysis indicates this materially increases the share of investment expenditure placed with Australian suppliers, noting that computing hardware is imported under either model, and results in service revenue being recognised and taxed in Australia rather than realised offshore.

2. Economic value per unit of installed computing capacity.

An AI factory is designed around high-density accelerated computing rather than the mixed workloads of a conventional data centre, with power, cooling and building systems specified to suit the computing hardware they support. The preliminary analysis indicates that this combination of facility efficiency, current-generation computing hardware and the workloads served is modelled to deliver materially more economic value per megawatt of installed computing capacity, at facility maturity, than the current Australian data centre benchmark. The comparison is drawn between a mature AI factory in a future year and the Australian data centre sector as recently measured and should be read as a point-in-time comparison.

PRELIMINARY FINDINGS RELATING TO TASMANIA

Firmus' Tasmanian portfolio comprises sites at Launceston, Wesley Vale and George Town. The preliminary modelling of that portfolio indicates the following, on an indicative basis and subject to finalisation.

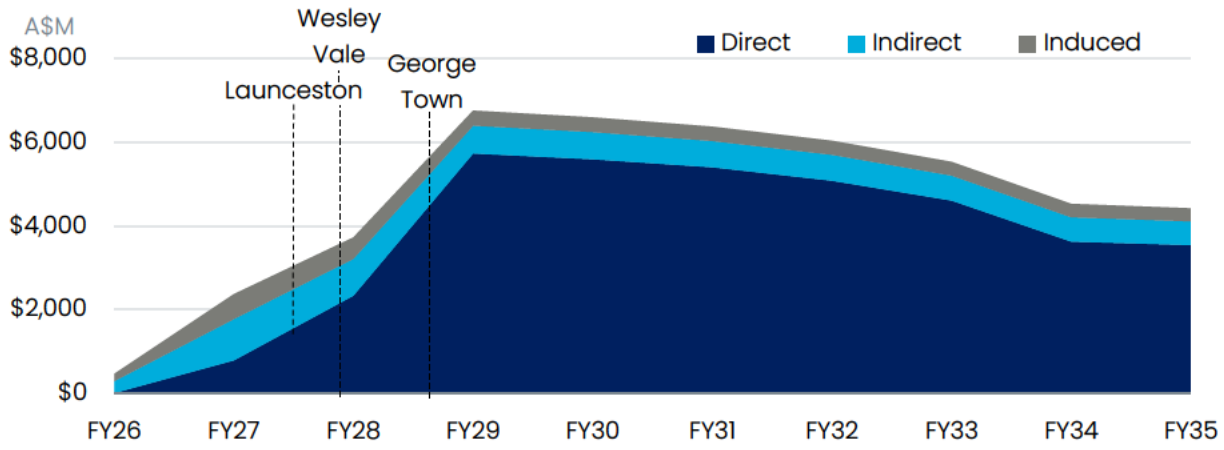
1. Contribution to Tasmanian gross state product:

The Tasmanian portfolio is estimated to contribute in the order of A$46.8 billion to gross state product cumulatively across FY26 to FY35, with approximately A$19.9 billion of that total accruing by FY30 and the annual contribution estimated to peak at approximately A$6.8 billion in FY29.[1] As per Figure 1, a

[1] These figures are based on preliminary modelling as at 07/08/2026, and are subject to final refinement of IT load assumptions.

significant portion of activity is driven by the wider Firmus supply chain during the construction phases, procuring goods and services to build the sites. Once the sites are operational, the direct activity of Firmus makes up a larger share of the contribution than it does during construction.

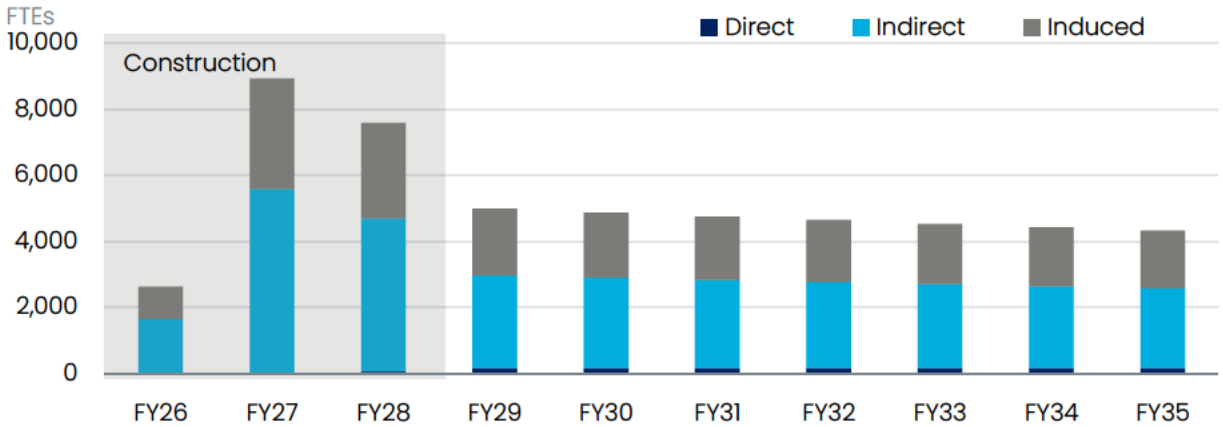
Figure 1: Economic Impact of Firmus in Tasmania (Direct + Indirect + Induced Contribution to GSP)



2. **Contribution to employment:**

Employment supported by the portfolio is estimated to peak at approximately 8,900 full-time equivalent positions in FY27 during the construction phase, as per Figure 2. Once the sites are operating, employment is estimated to average approximately 4,600 full-time equivalent positions per year from FY30, and to be in the order of 4,300 full-time equivalent positions in FY35. Direct on-site employment accounts for a small share of the total, with most of the estimated employment supported through supply chain procurement and household spending.

Figure 2: FTEs supported by Firmus' Three Tasmanian Sites



3. **Contribution to taxation revenue:**

Taxation revenue associated with the Tasmanian portfolio is estimated at approximately A$5.4 billion cumulatively across the modelling period, accruing across Commonwealth and Tasmanian revenue bases, with approximately A$1.1 billion of that total estimated to arise by FY30. These estimates have not been prepared or reviewed by a tax adviser and should not be relied upon as a statement of Firmus' tax position.

4. **Energy:**

At full build the Tasmanian sites are expected to carry a total contracted load of 444 MW. This figure is based on the combination of an expected 377 MW information technology (IT) load, required cooling of IT equipment, and other site operations, reflecting an expected operational capacity of 85%. This translates to approximately 3.3 TWh of consumption annually. Under Firmus' published Australian Energy Policy, the total contracted load (444 MW) would be matched by 2 times the load of new-build renewable generation and 2.5 times the load of new-build firming storage underwritten by Firmus.

The conditions of these generation and firming agreements are stated in Firmus' energy policy to be dependent on determinations by the Government Energy body of the relevant state/jurisdiction. The actual mix of generation and firming technologies that Firmus underwrites in Tasmania is subject to Firmus' negotiation with Hydro Tasmania on the optimal mix of new generation and firming for the Tasmanian Energy system that also meets Firmus' policy objectives. For these reasons, any OE estimates of renewable capacity or firming supported by Firmus are to be treated as prospective at this stage.

5. **Connectivity:**

Firmus is underwriting the Bernacchi-1 submarine fibre optic cable, announced with SUBCO in June 2026. This would be Tasmania's first new subsea fibre connection to mainland Australia in more than twenty years. The Tasmanian branch is expected to be operational in the second quarter of 2027 and is stated to deliver more than 60 terabits per second of additional capacity, providing dual pathways to the mainland including a direct route to Sydney.

6. **Contribution of the Launceston development:**

The Launceston development, Firmus' first operating Australian site, is estimated to contribute approximately A$12.8 billion to GSP cumulatively across FY26 to FY35, with a peak annual contribution of approximately A$1.7 billion to GSP in FY29. Construction employment is estimated to peak at approximately 2,500 full-time equivalent positions across direct, supply chain and induced channels in FY27. Approximately 1,360 full-time equivalent positions would be supported in an average year once all facilities are operating. Taxation revenue associated with the site is estimated at approximately A$1.6 billion across the period.

Of the estimated total contribution at Launceston, approximately A$2.7 billion flows through localised supply chain procurement and wage spending, drawing on Tasmanian contractors during construction and on facility management, maintenance and logistics providers during operations, with wages spent predominantly within Launceston and the surrounding municipalities. The peak annual contribution of approximately A$1.7 billion is equivalent to around 26 per cent of Launceston's gross regional product in 2024-25. That comparison is offered as a guide to the scale of the investment rather than as a statement that the contribution accrues to Launceston businesses and households, as a substantial share of the value added is capital income accruing to the facility's owner and parts of the supporting supply chain sit elsewhere in Tasmania and on the mainland.

BASIS AND LIMITATIONS

The estimates rest on data provided by Firmus, official statistics, and Oxford Economics Australia's own forecasts and modelling. Oxford Economics Australia has relied on the information provided by third parties in good faith, and any subsequent revision or update to that information, or to project scope and timing, will affect the estimates. Input-output modelling measures economic contribution rather than net economic benefit. Figures beyond FY32 are based on assumptions derived from prior years. The figures

set out above are preliminary, are provided for the purpose described in this letter, and should not be relied upon as final results.

Please contact us should the Committee or Firmus require further information on the scope or status of this work.

Yours sincerely

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Oxford Economics Australia