Accela

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The Secretary, Government Administration Committee A

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Submission: Inquiry into AI Data Centres in Tasmania, House of Assembly

1. Executive Summary

Accela Research (Accela) provides investment-grade climate transition research for institutional investors. Our work focuses on the intersection between transition strategy, capital allocation, execution and financial value.

In January, we published Scaling Data Centres without Derailing Net Zero, one of Australia's first comprehensive reports examining data centres, energy and emissions. Since then, we have continued to assess global and Australian data-centre developments, including how growing AI demand is changing their scale, location, energy requirements and infrastructure needs.

This submission draws on that broader research and applies it to Tasmania, using emerging local projects as case studies to assess the opportunities, risks and infrastructure implications of data-centre growth in the state.

One overarching observation is that, in high-emitting sectors, voluntary principles without binding mechanisms or mandatory disclosure requirements risk creating credibility gaps between ambition and targets and real-world results. Our research shows a similar pattern emerging across the data centre industry. For example, Accela's review of FY2025 disclosures from the three largest global hyperscalers (Google, Amazon and Microsoft) shows that voluntary reporting does not consistently provide investors, policymakers or communities with a clear picture on the environmental impact of individual facilities.

The analysis supports our Key Policy Recommendation to establish a data centre framework built around five pillars:

1. **Make impacts transparent:** Require facility-level disclosure of emissions, utilisation, energy and water efficiency.
2. **Bring clean power:** Require new data-centre demand to bring sufficient new renewable generation, progressively matched by hour with firming.
3. **Pay your own way:** Require developers to fund the grid and water infrastructure their projects need.
4. **Meet one national standard:** Set consistent national requirements, with faster approvals for projects that meet them.

5. **Deliver benefits to Australia:** Ensure development delivers tangible local benefits, including skills, compute access and data security.

Together, these measures would improve market transparency, strengthen investment signals, and support more informed infrastructure and capital allocation decisions as Australia's data centre sector expands. Most are practical to implement, with precedent already established by at least one major operator, or in comparable jurisdictions.

2. The Policy Challenge

Data centres have become utility-scale infrastructure, with material implications for electricity systems, water resources and long-lived capital investment.

For Tasmania, growing interest in large-scale data centres presents an opportunity to establish clear, enforceable requirements before the current investment pipeline locks in substantial electricity demand, infrastructure costs and environmental impacts. State-level requirements should complement emerging national standards while addressing Tasmania’s specific energy system, planning framework and community expectations

Recent developments reinforce the urgency of this task. The scale of the existing data centre pipeline means that Tasmania should assess projects cumulatively rather than treat each development as an isolated planning application.

3. What Our Analysis Shows

The current data centre growth trajectory poses material risks to electricity and water infrastructure, consumer costs, project delivery, and the sector's long-term resilience if policy guardrails are not established.

Grid & Economic Strain:

- **The "Paper Gap":** Operators frequently rely on annual Renewable Energy Certificates (RECs) that can be disconnected from the electricity they actually consume. These RECs reduce the Scope 2 emissions footprint when interpreted on a market-based basis, but the difference between market-based and location-based reporting can be stark as the former reflects purchasing decisions rather than actual physical emissions. For example, Google’s 2026 Environmental Report shows that Scope 2 emissions are more than five times larger when reported on a location-based basis compared to market-based emissions. The quality of the underlying instruments also matters. Microsoft’s accounting re-adjustment to drop low quality RECs increased reported emissions roughly tenfold. Mandatory disclosure of both market- and location-based emissions would make the gap visible and requiring time- and location-matched clean electricity procurement would close the gap by ensuring that renewable

energy is physically and temporally connected to actual data centre demand. According to the IEA, up to 80% hourly matching is achievable at roughly the same cost as annual matching, so credible matching is not cost-prohibitive. Amazon, the largest operator of the three, discloses no location-based emissions at all, highlighting that under voluntary settings, laggards would simply opt out.

- **Cost Socialisation:** In some jurisdictions, data centre connection costs have been passed on to utility customers. In the US, this totalled an estimated US$4.4 billion across seven states in 2024 alone. Leading US tech companies including Amazon, Google, Meta, Microsoft, OpenAI, Oracle and xAI committed in March 2026 to a non-binding Ratepayer Protection Pledge and the adoption of a "pay your own way" commitment, demonstrating there is likely a commercial basis for allocating these costs directly to projects. The US House Energy and Commerce Committee unanimously advanced a bill intended to build on this pledge, which would push states to formally consider measures to shield ratepayers from utility bill increases tied to new data centre development, indicating that public policy can be an effective instrument for establishing meaningful guardrails on the impact of data centres on electricity bills.

- **Demand Spikes:** Usage is growing exponentially (e.g., Microsoft's electricity usage has more than tripled since 2020). This creates "anchor" demand and proposals for off-grid gas-powered generation to meet that demand have begun to emerge, raising the risk of locking in gas infrastructure for 30+ years. If not blocked by regulatory intervention, such developments could potentially undermine Australia's net-zero targets.

- **Demand Concentration:** AI infrastructure developer, Firmus has requested a 450 MW long-term electricity contract for its three Tasmanian facilities. This is equivalent to as much as 30% of Tasmania’s current electricity use and would make Firmus the state’s largest electricity customer. Hydro Tasmania has confirmed that the state’s electricity system is currently broadly in balance and that meeting this demand would require additional generation. A further six confidential data centre proposals could add approximately 505–705 MW of demand. This creates material system-wide risks that cannot be adequately assessed through project-by-project planning decisions alone. Tasmania should therefore require coordinated assessment of cumulative generation, transmission, firming and reliability impacts before further large-scale capacity is approved.

- **Backup generation and fossil-fuel lock-in:** The approved 288 MW Bell Bay facility proposes 276 diesel generators. The council permits their use only during grid outages, genuine emergencies, and routine testing and maintenance. Firmus is appealing this condition so it can also use the generators when grid supply is curtailed or constrained, or during periods of “energy-market stress”. If approved, this would expand their role from emergency

backup to non-emergency firming. The case demonstrates the importance of retaining clear, enforceable limits on generator use so that nominally “backup” capacity does not become a material source of operational emissions, local air pollution and noise.

- **What good could look like:** Firmus’ projects in South Australia provide a useful counterpoint. Its initial 600 MW supply agreement is linked to 1.2 GW of new renewable generation, 1.5 GWh of new battery storage and demand flexibility, within an established electricity system. The full 2.3 GW proposed build-out remains contingent, and the renewable projects supporting the initial agreement are not yet publicly identified. However, it shows how large new data-centre demand can be linked to new electricity supply and demand flexibility rather than routine diesel use.

Environmental & Resource Scarcity:

- **Water Crisis:** Australian data centre demand is projected to reach 250 megalitres per day in Sydney alone by 2035, roughly a quarter of Greater Sydney’s residential drinking water use. This scale of consumption can drive water stress in already-strained regions, putting pressure on water prices and availability, and stoking public backlash. From an efficiency standpoint, local developers (e.g., NextDC) currently exhibit lower water usage efficiency compared to global peers.

- **The Energy-Water Trade-off:** High energy efficiency currently comes at the price of lower water efficiency. Google runs the most energy-efficient fleet of the three hyperscalers with a Power Usage Effectiveness (PUE) at 1.09, but it achieves this by withdrawing around ten gigalitres (GL) of water per gigawatt of load, 81% of it drinking-quality. Microsoft accepts lower energy efficiency (PUE 1.17) in exchange for leaner water use, at around 2.5 GL per gigawatt. Even so, its data centres in water-stressed Phoenix still withdrew nearly 1 GL last year. The trade-off is narrowing with new liquid-cooling advancements, but these design choices have an impact on local infrastructure and should be disclosed at the approval stage.

Social License & Delay Risk:

- Community opposition is a growing barrier. In the US, social license issues and grid/water constraints led to the delay or cancellation of ~US$130 billion in projects and the submission of 63 local data centre moratorium actions (54 of which have passed) in Q1 2026 alone. Australia should expect similar trends as awareness grows.

3. International Policy Benchmarks

Australia can learn from existing international frameworks to avoid common pitfalls:

- **European Union/Germany:** Employs the **Energy Efficiency Act (EnEfG)**, which mandates a PUE 1.2 and below for new data centres and waste-heat reuse obligations rising to 20% for facilities opening from 2028.

- **China:** Utilises a **geographic shifting policy** ("Eastern Data, Western Computing") to force buildouts in regions with abundant renewable resources, limiting expansion in coal-heavy areas.

- The **United States** offers a cautionary tale on **cost-recovery and moratoriums**, where uncontrolled growth has led to statewide freezes on developments to protect local power grids.

4. Recommended Policy Pillars

The Tasmanian Government's draft Statement of Expectations provides a useful starting point. In particular, it expects proponents to bring additional renewable generation into Tasmania, meet connection costs, pay an appropriate share of wider network costs and provide project-specific water-demand forecasts. However, the statement is non-statutory and creates no new approval mechanism. These expectations should therefore be converted into enforceable approval, connection and supply conditions, supported by standardised disclosure and compliance reporting.

To manage this sector, the State Government should adopt a five-pillar framework, grounded in the recommendations from Accela's Senate Inquiry submission.

Pillar 1: Make impacts transparent

- **Requirement:** The framework should move beyond voluntary reporting and require operators to disclose both market-based and location-based Scope 2 emissions, water withdrawals by source, Water Usage Effectiveness (WUE), and PUE at the *facility level* rather than just at a national corporate level. These disclosures should be made at the approval stage and subsequently on an annual basis. This would close the disclosure gap that currently makes independent assessment of the sector's climate footprint challenging.

Pillar 2: Bring clean power

- **Requirement:** Operators should bring sufficient new renewable generation to meet their additional electricity demand, with new supply delivered broadly alongside each stage of data-centre load and within the relevant electricity system.
- They should progressively match supply more closely to demand by the hour, supported by storage, demand flexibility and other firming capacity.

- **Requirement (firming):** Where operators contribute "firming" capacity to meet the Government's net-energy standard, that firming should be low- or zero-emissions (e.g. through storage, demand response or pumped hydro). Directing the sector's

firming demand to storage gives those technologies a large, creditworthy buyer and accelerates deployment in the whole grid.

- **Prohibition:** The framework should avoid creating incentives for dedicated off-grid fossil-fuelled generation by restricting its use where lower-emission alternatives are available. Diesel or gas generators approved for emergency backup should not be used for routine operations, demand management, grid firming or electricity-market participation. Approval conditions should specify permitted circumstances, operating-hour limits, emissions and noise requirements, and mandatory public reporting of generator use.

Pillar 3: Pay your own way

Water & Resource Security

- **Requirement:** Mandate the use of non-potable water for cooling (recycled water or dry-cooling systems), wherever possible.
- **Pay Your Own Way:** Infrastructure costs should be allocated to the data centre projects creating additional demand, preventing costs from being passed to residential ratepayers, especially in water-stressed or grid-strained regions.

Pillar 4: Meet one national standard

- **Requirement:** A coordinated Commonwealth framework, via the National Cabinet, which applies at the federal level. This would reduce regulatory fragmentation, provide greater certainty for investors, developers, and governments, and eliminate the risk of regulatory arbitrage where states compete for investment by lowering environmental or planning standards.
- **The upside for developers:** Fast-tracked approvals could be linked to proposals that meet nationally consistent disclosure and infrastructure standards.

Pillar 5: Deliver benefits to Australia

- **Requirement:** Tie approvals to tangible local benefits, such as:
    - **Skill Investment:** Funding for local research and tech-sector jobs.
    - **Compute Access:** Favourable terms for Australian startups and researchers to access domestic computing power.
    - **Security:** Compliance with the Protective Security Policy Framework (PSPF) for facilities holding citizen data.

Conclusion:

Australia's booming data centre and AI infrastructure sector presents a massive opportunity to anchor the nation as a leader in the global digital economy. However, because the industry is still in its infancy, proactive

policy intervention is vital to safeguard shared resources. Mandating that developers underwrite new renewable generation and pay their own grid costs ensures households and businesses do not bear the financial burden of the sector's immense power and water consumption.

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