

To: Government Administration Committee A

Regarding: Inquiry into AI Data Centres in Tasmania

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Executive Summary

Tasmania should approach the development of artificial intelligence and data-centre infrastructure with both an appreciation of the opportunities and a careful assessment of the costs and risks.

AI and data infrastructure may provide investment, employment, technological capability and economic diversification. However, large-scale facilities can also require substantial amounts of electricity, water, land and supporting infrastructure.

Those resources are not unlimited.

Tasmania's existing industries—including agriculture, tourism, forestry, food production and other regional businesses—already depend upon the State's natural resources and infrastructure. Tasmania's renewable energy, clean air and water, productive agricultural land, spectacular landscapes, wilderness and relatively non-industrialised character are themselves valuable economic assets.

The central issue for this inquiry should therefore not be simply whether Tasmania can attract AI and data-centre investment.

It should be:

"How can Tasmania accommodate new AI and data infrastructure without compromising the natural, agricultural, tourism, community and economic assets that already provide long-term value to Tasmanians?"

This submission recommends that:

- major AI and data facilities be subject to specific planning and environmental requirements;
- electricity, water, land and infrastructure impacts be transparently assessed;
- cumulative impacts of multiple facilities be considered;
- existing industries, particularly agriculture and tourism, be explicitly considered in project assessments;
- Tasmania's clean, green and relatively non-industrialised character be recognised as a strategic economic asset;
- developers make an appropriate upfront financial contribution towards existing infrastructure from which their projects will benefit;
- developers meet the full cost of new or upgraded infrastructure required by their projects;
- additional electricity generation and network capacity required to support major AI facilities be fully operational and commissioned before those facilities commence material electricity consumption;

- actual electricity and water consumption be publicly reported;
 - major Government commitments receive appropriate Parliamentary scrutiny;
 - affected communities have meaningful opportunities to participate in decisions;
 - employment, training, procurement, investment and community benefits be measurable and enforceable;
 - relevant Australian and international evidence concerning environmental, agricultural and community impacts be incorporated into project assessment and policy development;
 - pollinator and agricultural ecosystem impacts be assessed where major infrastructure is proposed in or near productive agricultural areas;
 - appropriate minimum separation distances be established between major energy infrastructure and residential areas, schools and other sensitive land uses;
 - prime agricultural land receive enhanced protection; and
 - a strategic assessment be undertaken to determine the appropriate scale and location of AI and data infrastructure in Tasmania.
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1. PROTECT PUBLIC RESOURCES AND THE ENVIRONMENT

Large-scale AI and data facilities are known significant users of electricity and water and may require substantial land and supporting infrastructure.

The Committee should therefore consider the effect of these developments on Tasmania's:

- electricity generation and network capacity;
- energy security and reliability;
- water resources;
- agricultural land;
- biodiversity;
- waterways;
- landscapes;
- roads and other infrastructure;
- waste-management capacity; and
- greenhouse emissions.

Assessments should consider not only the direct impacts of the facility but also associated substations, transmission infrastructure, roads, telecommunications, additional generation and other supporting works.

Most importantly, impacts should be assessed cumulatively.

A number of facilities may collectively create resource pressures that are not apparent when each project is considered separately.

Tasmania's natural resources should be treated as strategic assets rather than simply as inputs available to the highest-value proposed development.

Agriculture and agricultural land

Agriculture relies on reliable access to land, water, electricity, transport infrastructure and a healthy natural environment.

Tasmania's agricultural reputation is closely connected to its clean environment, reliable water, biosecurity and relatively unpolluted production systems.

Potential competition between data facilities and agriculture for electricity, water, strategically important land, infrastructure, construction resources and skilled workers should therefore be explicitly considered.

Prime agricultural land should not simply be treated as a development opportunity where another use offers a higher immediate financial return.

Agricultural land has long-term strategic value through food production, exports, regional employment, rural communities and Tasmania's food brand.

Where a proposed AI facility or associated energy infrastructure would occupy, fragment or materially constrain high-value agricultural land, the proponent should be required to demonstrate that alternative locations have been properly investigated.

Pollinators and agricultural ecosystems

The Committee should also consider evidence concerning the broader environmental consequences associated with increased electricity demand from AI and data infrastructure.

The University of Sydney's "The Digital Climate Footprint: From Global Data Centre Growth to Local Ecological Consequences", authored by Dr Rob Nicholls, is relevant to this consideration. The report (attached) examines the relationship between rapidly increasing data-centre electricity demand, associated emissions and ecological consequences, including potential risks to Australian pollinators.

Pollinators are an important component of functioning agricultural ecosystems. The potential interaction between climate change, extreme heat, habitat loss and other pressures on pollinator populations should therefore be considered when assessing the cumulative environmental effects of major AI infrastructure.

Where major AI facilities require substantial new electricity generation, transmission infrastructure or land development, assessments should consider potential effects on:

- native and managed bee populations;
- pollinator habitat and foraging areas;
- native vegetation;
- flowering corridors;
- agricultural productivity;
- habitat fragmentation;
- extreme heat exposure;
- bushfire and habitat-loss risks; and
- cumulative effects from multiple developments.

Tasmania should also learn from relevant Australian and overseas experience rather than waiting for comparable impacts to occur locally before regulatory responses are developed.

Tasmania's clean-and-green brand

Tasmania has spent decades developing a distinctive economic identity built around renewable energy, agriculture, premium food production, wilderness, nature and tourism.

Tasmania's natural environment, landscapes, clean air, food and sense of place are economic assets.

Historically, Tasmania's renewable electricity generation has been dominated by hydroelectricity, which generally has a relatively low visual presence across the broader landscape. By comparison, large-scale wind energy developments can introduce prominent towers, turbines, transmission infrastructure and associated roads into elevated, rural or otherwise visually significant landscapes.

While wind energy is an important component of renewable electricity generation, the cumulative visual and landscape effects of large-scale developments should be considered alongside the economic benefits of additional generation.

Tasmania's reputation as a relatively unspoiled and nature-rich destination is itself an economic asset. Changes to visually prominent landscapes may have implications for scenic values, tourism experiences, community expectations and Tasmania's broader "clean and green" brand.

The economic assessment of major proposals should therefore consider not only:

"Can Tasmania supply the resources required by a new facility?"

but also:

"What other economic and community uses could those resources support, and what is the long-term value of those existing uses?"

This is fundamentally an opportunity-cost question.

Suggested future legislation or regulation:

- *specific statutory provisions for the protection of strategic agricultural land, water resources, biodiversity and significant landscapes from inappropriate AI-related development;*
- *mandatory cumulative environmental assessment for major AI and associated energy infrastructure;*
- *mandatory assessment of impacts on agricultural ecosystems and pollinator habitat where relevant;*
- *a statutory requirement to consider Australian and international evidence from comparable developments;*
- *minimum separation distances for AI Data Centres and major energy infrastructure from residential dwellings, schools, childcare facilities, hospitals and other sensitive land uses;*
- *enhanced setbacks and protection for prime agricultural land and significant pollinator habitat;*
- *mandatory consideration of alternative sites where prime agricultural land would be materially affected; and*
- *a requirement that the long-term economic value of Tasmania's natural, agricultural and tourism assets be considered in major project assessments.*

2. ENSURE THE RESOURCE MANAGEMENT AND PLANNING SYSTEM ADEQUATELY RECOGNISES AND ADDRESSES THE SPECIFIC IMPACTS OF AI AND DATA FACILITIES

AI and data facilities have characteristics that distinguish them from many conventional industrial developments. They operate continuously, require substantial electricity and cooling infrastructure, and can expand rapidly as computing requirements increase.

Whilst they might be developed on land zoned General Industrial, which allows impacts beyond the property boundaries, these impacts are different to any development contemplated within the current planning framework. These impacts must be fully quantified and understood prior to approval of the projects.

Approvals should also address foreseeable expansion rather than permitting significant increases in resource consumption through a series of incremental approvals.

The planning system should therefore specifically address:

- continuous and potentially very large electricity demand;
- water consumption and cooling technology;
- future expansion;
- cumulative demand;
- transmission and network infrastructure;
- visual and landscape impacts;
- noise and lighting;
- construction impacts;
- electronic waste;
- decommissioning;
- impacts on neighbouring industries and communities; and
- associated renewable-energy infrastructure.

Approvals should also address foreseeable expansion rather than permitting significant increases in resource consumption through a series of incremental approvals.

The planning system should also assess the complete infrastructure chain required to support the facility, rather than treating the data centre, generation infrastructure, transmission lines, substations and access infrastructure as unrelated projects.

Strategic assessment and location

Tasmania should consider establishing a strategic framework identifying areas where major AI and data facilities may be appropriate and areas where development would conflict with agricultural, environmental, tourism or community values.

This should consider cumulative impacts on:

- electricity;
- water;
- agriculture;
- tourism;
- landscape;
- biodiversity;
- infrastructure;
- communities;
- housing and labour markets;

- existing industries; and
- Tasmania's economic brand.

Separation distances

Clear and enforceable minimum separation distances should be considered between AI Data Centres and major energy infrastructure associated with AI development and:

- residential dwellings;
- schools and childcare facilities;
- hospitals and aged-care facilities;
- residential settlements;
- prime agricultural land;
- intensive agricultural operations;
- significant pollinator habitat; and
- areas of high environmental, landscape or tourism value.

For major renewable-energy infrastructure, particularly large wind turbines and associated transmission infrastructure, the Committee should review whether existing Tasmanian separation distances remain appropriate given the increasing scale of modern infrastructure.

Setback requirements should take account of the combined effects of noise, shadow flicker, blade glint, visual prominence, lighting, access roads, transmission infrastructure and other associated impacts.

Evidence-based regulation

Tasmania should adopt a "learn first, approve second" approach.

Where comparable developments in Australia or overseas have identified environmental, agricultural, community, amenity, biodiversity or infrastructure issues, those lessons should inform Tasmanian policy before equivalent projects are approved.

Suggested future legislation or regulation:

- *a specific AI and Data Infrastructure category within the planning framework;*
- *statutory thresholds based on electricity demand, water consumption, land area and infrastructure requirements;*
- *mandatory assessment of associated generation and transmission infrastructure;*
- *mandatory cumulative-impact assessment;*
- *statutory controls over staged expansion of approved facilities;*
- *evidence-based minimum separation distances from sensitive land uses;*
- *enhanced protection for prime agricultural land;*
- *mandatory consideration of alternative locations;*
- *mandatory lifecycle and decommissioning requirements; and*
- *a statewide strategic planning framework identifying appropriate and inappropriate locations for major AI and data infrastructure.*

3. PARLIAMENTARY OVERSIGHT AND ACCOUNTABILITY FOR NEW FACILITY CONSTRUCTION AND RESOURCE ALLOCATION

Where a facility involves substantial electricity demand, water allocation or Government support, appropriate Parliamentary oversight should apply.

This could include:

- notification of major projects above defined thresholds;
- reporting of Government funding and concessions;
- disclosure of major infrastructure commitments;
- annual reporting on resource consumption;
- reporting against promised economic benefits; and
- independent auditing of significant public commitments.

Tasmanians should not have to rely on fragmented announcements or individual Freedom of Information requests to understand how significant public resources are being allocated.

Infrastructure costs and the beneficiary-pays principle

Major AI and data-centre developments should be required to make an appropriate upfront financial contribution towards existing infrastructure from which their projects will benefit.

This should be in addition to meeting the full cost of any new or upgraded infrastructure required as a consequence of the development.

A major private development should not simply inherit the benefit of infrastructure that has been built, maintained and, in many cases, funded over decades by Tasmanian taxpayers, electricity consumers and existing businesses.

Where a development will derive significant commercial benefit from existing electricity generation, transmission and distribution infrastructure, roads, water infrastructure, telecommunications or other publicly supported infrastructure, an appropriate upfront contribution should be required as a condition of approval.

The contribution should reflect the scale of the proposed development and the value of the existing infrastructure and capacity upon which it will rely.

This contribution should not substitute for payment of the full cost of any additional infrastructure, augmentation or capacity required specifically to service the project.

Energy and infrastructure before demand

There should also be a clear "infrastructure and energy before demand" requirement.

Where a proposed AI or data facility requires additional electricity generation, transmission, distribution or other energy infrastructure, that additional capacity should be fully funded, constructed, connected, tested and commissioned before the data centre commences operations or draws material amounts of electricity from the Tasmanian system.

New electricity demand should follow the availability of the required additional supply and network capacity.

Before a major AI facility becomes operational, the proponent should demonstrate that:

- the required upfront contribution towards existing infrastructure has been paid;
- project-specific infrastructure and required network augmentation has been funded;

- additional electricity generation required to support the facility is operational and commissioned;
- required transmission and distribution upgrades are completed and commissioned; and
- sufficient additional energy and network capacity is demonstrably available.

This would reduce the risk that existing Tasmanian households and businesses are required to provide capacity to a new major industrial customer while promised generation or network infrastructure remains incomplete.

Suggested future legislation or regulation:

- *a statutory beneficiary-pays principle for major AI and data infrastructure;*
 - *mandatory upfront contributions towards existing infrastructure from which major developments will derive substantial benefit;*
 - *mandatory payment of the full cost of project-specific infrastructure and network augmentation;*
 - *statutory requirements preventing major AI facilities from commencing material operations until required additional energy and network capacity has been commissioned;*
 - *independent verification of generation and network capacity before commencement;*
 - *Parliamentary notification of projects exceeding defined electricity, water or financial thresholds; and*
 - *independent auditing of significant Government infrastructure commitments, subsidies, concessions and guarantees.*
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4. TRANSPARENT PUBLIC DISCLOSURE OF RESOURCE CONSUMPTION

I recommend establishing a publicly accessible Tasmanian AI and Data Facilities Register.

For major facilities, this should disclose:

- ownership and operator;
- location;
- approved capacity;
- actual electricity consumption;
- peak electricity demand;
- water allocation;
- actual water consumption;
- water source;
- cooling technology;
- relevant emissions;
- Government financial assistance;
- public infrastructure commitments;
- employment;
- local procurement;
- community-benefit commitments;
- planning approvals; and
- compliance information.

The distinction between forecast consumption and actual consumption is particularly important.

The community should be able to determine whether a facility is using the resources it was expected and approved to use.

Commercial confidentiality should not become a mechanism for withholding information about significant public resources or Government commitments.

Suggested future legislation or regulation:

- *a statutory Tasmanian AI and Data Facilities Register;*
 - *mandatory annual reporting of electricity and water consumption;*
 - *mandatory reporting of peak electricity demand;*
 - *disclosure of Government funding, subsidies, concessions and infrastructure commitments;*
 - *disclosure of approved versus actual resource consumption;*
 - *independent verification or auditing of reported figures; and*
 - *penalties or regulatory consequences for material non-compliance or inaccurate reporting.*
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5. ADEQUATE COMMUNITY CONSULTATION

Consultation should occur before major decisions are effectively settled.

Information sessions conducted by proponents are not the same as proper consultation. They can become a box-ticking exercise where proponents control the information provided, determine the issues presented and potentially omit matters that they do not wish to draw to community attention. I raise this concern based on my firsthand experience with the Long Reach and Wesley Vale developments.

Affected communities should receive complete and balanced information about:

- electricity demand;
- water use;
- land requirements;
- visual impacts;
- noise;
- lighting;
- traffic;
- construction;
- environmental effects;
- infrastructure requirements; and
- proposed economic and community benefits.

Agricultural producers, tourism operators, local businesses, councils, Traditional Owners, environmental organisations and residents should all have meaningful opportunities to participate.

Where projects are technically complex, affected communities should have access to sufficient independent information to enable informed participation.

Independent information

Where a proposal involves highly technical matters, proponents should not be the sole source of information available to affected communities.

Independent technical advice should be available where necessary to allow communities to properly understand:

- electricity demand;
- environmental impacts;
- noise;
- visual impacts;
- water consumption;
- traffic;
- infrastructure requirements; and
- proposed economic benefits.

Suggested future legislation or regulation:

- *minimum statutory consultation periods;*
- *mandatory publication of comprehensive project information before consultation begins;*
- *independent technical information or expert assistance for materially affected communities;*

- *mandatory consultation with affected agricultural and tourism businesses;*
 - *consultation requirements before major Government commitments are finalised;*
 - *independent technical advice able to be sourced by planning authorities, cost recovered from the applicant;*
 - *minimum requirements for responses to issues raised during consultation; and*
 - *statutory requirements preventing consultation from being treated as merely an information session conducted by the project proponent.*
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6. ENSURE THE TASMANIAN COMMUNITY RECEIVES TANGIBLE BENEFITS

Large-scale AI and data facilities should provide benefits that are measurable rather than relying solely on broad claims about investment.

Potential conditions should include:

- permanent Tasmanian employment;
- apprenticeships and training;
- Tasmanian procurement;
- partnerships with Tasmanian education and research institutions;
- research and development;
- regional investment;
- contributions to community infrastructure;
- contributions towards existing electricity and water infrastructure;
- full funding of project-specific infrastructure and network augmentation; and
- support for local economic development.

These commitments should be incorporated into enforceable agreements or planning conditions wherever appropriate.

The Government's draft expectations already state that projects should maximise benefits for Tasmania and provide enduring benefits.

The inquiry should consider how those expectations can be made measurable and accountable.

Infrastructure contributions should not be treated as a substitute for broader community benefits.

A project should both pay its fair share of the infrastructure it uses and creates and provide measurable economic and community benefits to Tasmania and local community where it is constructed.

Suggested future legislation or regulation:

- *legally enforceable community-benefit agreements for major facilities;*
 - *measurable employment and training targets;*
 - *measurable Tasmanian procurement targets;*
 - *reporting against promised employment, investment and procurement outcomes;*
 - *financial contributions towards appropriate community infrastructure;*
 - *enforceable regional-development commitments where appropriate; and*
 - *penalties or other consequences where material promised benefits are not delivered.*
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7. ANY OTHER MATTER INCIDENTAL

Water

Water should be treated as a strategic public resource.

The inquiry should consider:

- the volume of water required;
- the source of that water;
- whether potable water is proposed;
- cooling technology;
- seasonal demand;
- effects during drought;
- competing agricultural and community requirements;
- wastewater and discharge; and
- cumulative demand from multiple facilities.

Where water resources are limited, the needs of existing communities, agriculture and established industries should be explicitly considered before allocating additional water to major data-centre developments.

Lifecycle and decommissioning

Approvals should address the entire lifecycle of a facility.

Proponents should demonstrate:

- who will fund decommissioning;
- how electronic waste will be managed;
- how land will be rehabilitated;
- what happens to associated infrastructure;
- how environmental impacts will be remediated; and
- what financial security exists if the operator ceases business.

The public should not inherit substantial remediation liabilities from privately owned infrastructure.

Strategic capacity

Tasmania should also consider whether there should be an overall strategic limit or threshold for cumulative AI and data-centre electricity and water demand.

The State should understand how much additional demand can reasonably be accommodated while maintaining:

- energy security;
- water security;
- agricultural productivity;
- protection of existing electricity users;
- environmental values; and
- the long-term economic interests of Tasmania.

Suggested future legislation or regulation:

- *statutory water-use thresholds for major AI facilities;*

- *drought and water-security provisions that prioritise essential community and agricultural requirements;*
 - *mandatory financial security for decommissioning and environmental rehabilitation;*
 - *lifecycle management requirements;*
 - *electronic-waste management obligations;*
 - *cumulative statewide electricity and water thresholds for AI/data-centre development; and*
 - *periodic strategic reviews of Tasmania's capacity to accommodate further AI and data-centre development.*
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KEY RECOMMENDATIONS

I respectfully recommend that the Committee consider:

1. *Developing specific planning provisions for large-scale AI and data facilities.*
2. *Requiring comprehensive assessment of electricity, water, land, biodiversity, landscape and infrastructure impacts.*
3. *Applying cumulative-impact assessment where multiple facilities are proposed.*
4. *Explicitly assessing impacts on existing industries, particularly agriculture and tourism.*
5. *Recognising Tasmania's clean, green, natural and relatively non-industrialised character as a strategic economic asset.*
6. *Protecting high-value agricultural land and water resources from inappropriate development.*
7. *Requiring major AI and data-centre developers to make an appropriate upfront financial contribution towards existing infrastructure from which their projects will benefit.*
8. *Requiring developers to meet the full cost of new or upgraded infrastructure, generation, transmission and network capacity required specifically to service their projects.*
9. *Requiring all additional electricity generation and network capacity necessary to support a major AI data centre to be fully constructed, connected, tested and commissioned before the facility commences operations or draws material amounts of electricity.*
10. *Protecting existing electricity users and industries from disproportionate costs or reduced reliability arising from new large-scale electricity loads.*
11. *Incorporating relevant Australian and international evidence into project assessment and regulatory development, including evidence concerning environmental, agricultural and pollinator impacts.*
12. *Requiring assessment of potential impacts on pollinators and agricultural ecosystems where major AI-related energy or infrastructure development is proposed within or adjacent to productive agricultural areas.*
13. *Establishing evidence-based minimum separation distances between major energy infrastructure and residential dwellings, schools, childcare facilities and other sensitive land uses.*
14. *Establishing enhanced protection for prime agricultural land, important pollinator habitat and areas of high environmental, landscape or tourism value.*
15. *Requiring proponents to demonstrate that alternative locations have been properly considered where a proposal would occupy, fragment or materially constrain prime agricultural land.*
16. *Establishing a public register of major AI and data facilities and their actual resource consumption.*
17. *Providing appropriate Parliamentary oversight of major facilities and significant Government commitments.*

- 18. Requiring meaningful community consultation before major projects are approved or Government commitments are finalised.*
- 19. Providing affected communities with access to sufficient independent technical information to enable informed participation.*
- 20. Making employment, training, procurement, investment and community benefits measurable and enforceable.*
- 21. Requiring lifecycle and decommissioning plans and appropriate financial security and possible upfront bond.*
- 22. Establishing appropriate statutory requirements for water consumption, drought protection and wastewater management.*
- 23. Requiring major developers to demonstrate that their proposed facilities will not impose disproportionate costs on existing electricity users, taxpayers or public infrastructure.*
- 24. Undertaking a strategic assessment of the appropriate scale, location and cumulative resource requirements of AI and data infrastructure in Tasmania.*
- 25. Establishing a regulatory framework that learns from documented Australian and international experience before approving projects that may create similar environmental, agricultural, infrastructure or community impacts.*

CONCLUSION

Tasmania should welcome innovation and investment while recognising that the State's existing economic strengths are themselves valuable and should not be taken for granted.

Agriculture, tourism, food production and other established industries already generate employment, investment and regional economic activity. They rely upon Tasmania's land, water, renewable energy and natural environment.

Tasmania's reputation for clean air, clean water, premium food, spectacular landscapes and relatively unindustrialised communities is not merely a matter of sentiment. It is an economic asset.

The State should therefore avoid a narrow assessment in which the benefits of AI and data infrastructure are measured only through new investment and construction activity while the potential costs to existing industries and environmental assets are treated as externalities.

The appropriate question is whether new infrastructure can add to Tasmania's economic base without diminishing the assets that have made Tasmania successful in the first place.

Where AI and data facilities can meet that test, they may provide genuine opportunities for Tasmania.

Where they require substantial public resources, compete with existing industries, threaten environmental values or undermine the State's established economic proposition, those impacts should be transparently identified and appropriately addressed.

Tasmania should seek investment that complements its strengths, pays its fair share of both existing and new infrastructure costs, provides measurable benefits to the community and protects the natural and economic assets of future generations.

The experience and evidence emerging internationally and within Australia should be used to ensure that Tasmania does not repeat problems that could reasonably have been anticipated.

The environmental consequences of AI infrastructure should also be assessed beyond the physical boundaries of the data centre itself. As the University of Sydney's Digital Climate Footprint demonstrates, the consequences of rapidly increasing data-centre demand can extend through electricity consumption, emissions, climate effects and ultimately to ecological systems and pollinators that support food production.

AI investment should therefore be assessed against the value of what Tasmania already has, not just the value of what it might attract.

Growth should add to Tasmania's existing strengths—not come at their expense.