Submission On Tasmania's Draft Expectations For Data Centres And AI Infrastructure Developers

1 Overall Position

I support the Government's intention to attract responsible data centre investment that delivers enduring benefits to Tasmania while protecting existing customers, communities and the environment. The draft provides a useful starting point for predictable investment and proportionate assessment. [1]

My principal concern is whether the existing arrangements can consistently deliver the outcomes the Government expects. Several expectations use mandatory language, but the Statement expressly creates no new legal duties or assessment criteria. Its effectiveness will therefore depend on the powers, contracts, resources and responsibilities that give each expectation practical effect.

I recommend retaining the overall approach, supported by a clear implementation plan, consistent technical assessment and measurable commitments. Where an existing mechanism cannot deliver an essential outcome, Government should identify and address the specific gap. Waste heat reuse is a particular example requiring a separate examination of legal coverage.

This submission addresses all seven expectations. Appendix A develops beneficial waste heat reuse. Appendix B examines whether Hydro Tasmania and TasNetworks can practically meet the electricity expectations, when competing demands may require tradeoffs, and how Hydro's role could evolve. The other issues are addressed here.

2 Strengths Of The Draft

The draft connects investment attraction with lasting Tasmanian benefits. Its emphasis on ongoing employment, skills, local procurement and digital capability provides a sound basis for evaluating proposals beyond construction expenditure.

The energy provisions recognise additional renewable generation, the timing of supply and demand, firming availability, flexibility and protection of existing customers. The water provisions similarly recognise efficiency, supply security and infrastructure costs. These are important safeguards to retain.

Early community engagement and coordination through the Office of the Coordinator General can improve project design and reduce avoidable delays. The explicit preservation of independent statutory and commercial decisions is also important. Proportionate use of existing pathways, together with transparency and periodic review, is a practical foundation. [1]

3 Gaps Requiring Clarification

Giving Expectations Practical Effect

The final Statement should distinguish legal obligations, commercial requirements and voluntary policy expectations. For each material outcome, accompanying guidance should identify the responsible body, evidence required, decision point, implementation mechanism and subsequent compliance responsibility. Mandatory language should have an identified basis; a policy statement alone cannot extend an authority's powers.

Government should check that existing planning and environmental processes consistently address the material impacts of major data centres. This should include how projects are classified, when referral to or consultation with relevant authorities and infrastructure providers is required, and how supporting equipment and staged expansion are assessed. The review should identify any gaps in assessment or responsibility requiring action, while recognising differences justified by location, scale and impacts.

Economic Benefits And Public Risk

Expectation 1 should require realistic forecasts distinguishing temporary construction employment from ongoing operational employment. Local procurement should identify expenditure likely to remain in Tasmania, and training commitments should specify opportunities and delivery partners. Digital capability and community benefits should be supported by identifiable activities, beneficiaries and milestones.

For major proposals involving public infrastructure or discretionary assistance, Government should consider benefits alongside attributable costs, residual liabilities and alternative uses of scarce resources. Tax and rate payments contribute to public value but do not establish that all wider costs are recovered. Infrastructure arrangements should address staged investment, security for commitments, early closure and assets left without sufficient demand.

Water Supply And Resilience

Expectation 5 requires annual demand forecasts and resilience to low rainfall. Supplement these with peak daily and seasonal demand, sources and supply limits, storage replenishment, drought scenarios and realistic expansion stages. Assessment should show how cooling performs during concurrent high temperatures and supply restrictions, taking account of future climate conditions. Annual averages alone can conceal the period of greatest pressure.

Recycled or non potable supply should be assessed for actual availability, quality and treatment needs. Wastewater assessment should identify volume, temperature, chemical composition and destination, including cooling system discharges and contaminated stormwater. Water savings should be considered alongside changes in electricity consumption and other environmental effects. Relevant suppliers and regulators should confirm the arrangements before the corresponding operational demand is committed.

Ultimate Development And Cumulative Effects

Information should describe the proposed ultimate campus and its stages, even where approval is sought initially for a smaller component. This does not authorise unapproved stages. It allows decision makers to understand foreseeable combined loads, cooling equipment, noise, water demand and infrastructure requirements. Separate applications should not obscure functional relationships or the cumulative demands of other developments in the same precinct.

Operational Environmental Controls

The draft already identifies noise, emissions, wastewater, fire safety, heritage and natural values. The task is to ensure that the relevant pathway assesses these matters competently and produces conditions capable of being checked during operation. [1]

Noise assessment should consider continuous cooling equipment, tonal and low frequency characteristics where relevant, nighttime operation, generator testing, credible simultaneous operation and cumulative precinct noise. Conditions should define the assessment method, relevant receivers, operating assumptions and commissioning verification. Complaints need a clear investigation and corrective action process.

Chemical assessment should identify cooling fluids, refrigerants, water treatment chemicals, fuels and fire suppression agents, their quantities and credible release pathways. Specifically screen for per and polyfluoroalkyl substances, known as PFAS, in proposed fluids and for relevant legacy site contamination. Suitable alternatives should be considered, with containment, disposal and monitoring proportionate to demonstrated risk. PFAS should be assessed against the applicable legal requirements and current national environmental management guidance. This is a request to establish the chemicals actually proposed, not an assumption that every cooling system contains PFAS. [5, 6]

Battery and fuel installations require coordinated fire and emergency assessment, including access, incident response and containment of contaminated firewater. Where relevant, also address generator emissions, lighting, contaminated land, habitat and heritage impacts, and disposal or recovery of

equipment and spent fluids. Each matter should sit with the authority legally responsible for it; significant risks should not be left between agencies.

Community Engagement And Reporting

Early engagement should disclose the ultimate proposal, staging, expected ongoing benefits, resource requirements, material impacts and mitigation options in accessible language. It should include the Tasmanian Aboriginal community and affected neighbours, explain which matters remain open to influence, and record how concerns affected design. A continuing contact and complaints process should be available. Engagement remains valuable where statutory advertising is not required, as the draft recognises.

Expectation 7 largely encourages disclosure beyond current legal duties. Government should specify a proportionate reporting framework for material facilities, coordinated with any national requirements. Report forecasts and actual performance using consistent definitions, including operational employment, local procurement, community commitments, environmental results and material incidents, alongside electricity, water and heat measures. Protect specific sensitive information through targeted withholding while publishing meaningful totals and assessment conclusions.

Waste Heat And Electricity

Waste heat is an omitted opportunity under maximising benefits to Tasmania. Appendix A, Sections A1 to A3, explains its potential benefits and limits. Sections A6 to A8 develop early assessment, feasible delivery, proportionate provision for future reuse and reporting, supported by the consistent legal coverage examined in Sections A4 and A5.

The electricity objectives are supported, but their simultaneous delivery depends on demand scale, location, timing and flexibility. Appendix B, Sections B1 to B3, distinguishes annual energy, firm supply during adverse periods and network capacity. Sections B4 and B5 examine the evolving electricity system and Hydro's future role; B6 and B7 set out implementation measures and challenge questions.

Local Diesel Emissions

The reference to air emissions in Expectation 6 should be supported by explicit assessment guidance for diesel generators. Diesel exhaust contains fine particulate matter and nitrogen oxides, among other pollutants. Assessment should consider PM2.5, meaning particles no larger than 2.5 micrometres, and other relevant pollutants according to the equipment and exposure pathways. [7]

Assess routine testing, credible simultaneous operation during prolonged outages and any proposed use for demand management or electricity market services. Forecast annual emissions and assess short periods of intensive operation; low annual operating hours do not establish that short duration exposure is acceptable. Include background pollution, other precinct sources, local weather and nearby homes and workplaces.

Where nearby agricultural production or sensitive vegetation could be exposed, assess relevant deposition and gaseous pollutant effects. Nitrogen oxides can contribute to ozone formation, and ozone can damage sensitive vegetation. The significance of these effects for a particular proposal requires assessment of emissions, atmospheric conditions and exposure. Approval conditions should specify suitable equipment standards, exhaust arrangements, operating controls, records and proportionate verification. [7, 8]

Facility And Company Carbon Reporting

Scope 1 covers direct greenhouse emissions, including diesel and other fuel combustion and relevant refrigerant leakage. Scope 2 covers emissions associated with purchased electricity. Material facilities should disclose both, alongside the operator's aggregate Australian totals across facilities. Define reporting boundaries and operational responsibility so leased capacity and shared services do not create omissions or duplicate totals.

Report gross emissions before offsets, with credits or offsets shown separately. For Scope 2, disclose the result using grid average emissions and the result based on qualifying electricity contracts or certificates, under recognised methods. Explain the instruments supporting renewable claims. These accounting measures do not establish the development's consequences for generation, imports, exports or Hydro storage; Appendix B, Sections B3 to B6, addresses the separate system assessment. [9]

National Reporting And The Safeguard Mechanism

The National Greenhouse and Energy Reporting scheme already includes corporate group reporting thresholds involving combined Scope 1 and Scope 2 emissions. Tasmania should build on that information and align additional disclosure with national reporting, while ensuring meaningful facility information is available. [10]

The Safeguard Mechanism generally applies where a facility's annual covered Scope 1 emissions exceed 100,000 tonnes of carbon dioxide equivalent. Purchased electricity emissions are Scope 2 and do not themselves bring a data centre within coverage. Aggregated reporting across a company is therefore distinct from applying Safeguard obligations to that aggregate. [11]

Government should clarify applicable obligations and advocate Commonwealth consideration of whether the facility based approach adequately addresses data centre companies' aggregate Australian emissions. This would be a national policy review, not a change effected by the Tasmanian Statement. Any consideration of Scope 2 coverage should address the relationship with regulation of electricity generators and avoid counting the same emissions twice in national totals.

4 Opportunities to Improve Delivery

Common Guidance And Coordinated Assessment

Government can improve consistency without creating a separate planning approval system. Publish a common information checklist and technical guidance for major facilities, with requirements scaled to their impacts. Guidance should clarify relevant classifications, referrals and consultation, assessment of ultimate development and cumulative effects, and the evidence required for measurable environmental controls. It must operate within existing statutory criteria.

The Office of the Coordinator General should coordinate engagement and maintain a project pathway identifying the relevant authorities, dependencies and unresolved issues. This should include the Environment Protection Authority (EPA), TasNetworks, TasWater, water resource regulators, fire and safety authorities, and heritage and natural values bodies as relevant. Some involvement occurs through separate approvals or commercial processes rather than formal planning referrals. Coordination should preserve independent decisions and establish responsibilities before major design commitments.

EPA Expertise Supporting Councils

If the number of major projects is small, a shared specialist service may be more effective than requiring each council to develop the full expertise independently. I favour retaining Level 1 treatment where appropriate, supported by a formal and adequately resourced EPA arrangement. Support should cover technical assessment, drafting conditions, commissioning, monitoring and compliance during operation and expansion.

EPA already provides guidance and standard environmental conditions for councils. A dedicated arrangement could build on these resources, with agreed funding, access to specialists and response times. Council accountability remains where the law places it; seconding staff does not itself transfer statutory powers. [2, 3]

Direct EPA assessment should remain available where warranted. Section 24 of the Environmental Management and Pollution Control Act 1994 provides a referral mechanism for permissible Level 1 activities before the planning decision, subject to statutory requirements. Referral does not automatically

establish continuing Level 2 status; that requires the relevant Board determination. Guidance should explain when to seek referral early enough for the process to work. [4]

The Statement should retain its recognition of Commonwealth cyber security and privacy obligations. Common guidance should identify the relevant responsibilities without duplicating those regimes.

Productive Heat Use And Electricity Planning

Appendix A, Sections A4 and A5, develops a statewide statutory framework with proportionate duties and documented exemptions. Government should adopt the expectation now, including for existing facilities with an ultimate nameplate capacity exceeding 10 MW, while establishing the lawful mechanism and reasonable transition arrangements. Immediate policy adoption does not itself change existing permits or contracts. Sections A6 and A7 explain feasibility assessment and delivery, including when preserving future access is appropriate.

Appendix B, Sections B2, B3 and B6, recommends testing demand against generation, firming and network capability, including cumulative commitments and adverse conditions. Government should clarify how tensions between Hydro's commercial returns, energy security and broader market opportunities are resolved. Sections B4 and B5 consider how renewable generation, interconnection and storage could change Hydro's role. Section B7 provides challenge questions for the strategic assessment proposed in R6.

5 Risks to Achieving the Government's Intentions

Inconsistent Assessment And Unclear Accountability

Similar developments could face different information requirements or environmental controls if classifications, referral decisions and technical capacity vary. This creates uncertainty for investors and communities. Shared guidance and specialist support would reduce that risk, but need clear responsibilities and funding throughout the operating life of a facility.

There is also a risk that a commitment is considered by several agencies yet made enforceable by none. An implementation plan should identify where permit conditions, supply contracts or other lawful instruments apply, and who responds to non delivery. Strategic electricity allocation and beneficial heat reuse cannot be assumed to follow from conventional assessment of local environmental impacts.

Commitments Preceding Capacity Or Supporting Investment

Development, electricity connection, water supply and supporting generation may proceed on different timetables. Early expectations of supply or public support can narrow later choices. Coordination should identify the conditions and dependencies of each commitment, especially where demand begins before supporting infrastructure is available.

Appendix B, Section B3, explains why there is no single statewide demand threshold that guarantees all electricity objectives. New renewable energy on an annual basis does not necessarily supply demand during a sustained shortfall. Hydro's water, dispatch flexibility and drought resilience have competing uses, while network limits depend on location. Sections B6 and B7 propose assessing and disclosing tradeoffs before commitments become difficult to reverse.

Costs And Benefits Diverging Over Time

Benefits may fall short if operations are smaller than forecast, local procurement is limited or community commitments lack delivery arrangements. Infrastructure costs may persist if a project contracts or closes. Commercial agreements should allocate these risks explicitly, and reporting should compare actual outcomes with the commitments on which public decisions relied.

Environmental demands can also change as equipment, cooling systems or facility utilisation evolve. Material changes should trigger the appropriate reassessment. Any approvals or exemptions should make clear which assumptions remain relevant and how changes are managed.

Missed Opportunities And Delayed Review

Heat reuse options can be lost when site selection and cooling design are fixed before nearby demand is examined. Appendix A, Sections A3, A6 and A7, therefore proposes early assessment and proportionate provision for future access. Existing facilities should be assessed through reasonable transition arrangements rather than an automatic retrofit requirement irrespective of feasibility.

Waiting for a national reporting framework could leave Tasmania without information needed for current decisions. A compatible interim framework can be introduced through available lawful mechanisms and adjusted when national requirements are settled. Government should set a first review date and earlier review triggers for material demand growth, significant supply constraints or evidence that the existing arrangements are failing to deliver the expected outcomes.

6 Recommendations

I recommend the following focused changes to the Statement and accompanying implementation arrangements. References to mandatory requirements should be matched to lawful powers or contracts.

R1 Publish An Implementation And Accountability Plan

Retain the draft's overall approach. Identify the mechanism, evidence, decision point and responsible authority for each material expectation, distinguish binding obligations from voluntary commitments, and publish a timetable for resolving demonstrated gaps. This applies across Expectations 1 to 7.

R2 Establish Consistent Assessment Guidance

Under Expectation 6, publish common guidance covering classification, information requirements, ultimate development, cumulative impacts and timely referral to or consultation with all relevant authorities and infrastructure providers. Coordinate project pathways through the Office of the Coordinator General while preserving independent statutory and commercial decisions.

R3 Provide Formal EPA Support And Clear Escalation

Retain Level 1 treatment where appropriate, with funded EPA technical support for councils throughout assessment and operation. Define compliance responsibilities and early referral arrangements for cases warranting direct EPA assessment. Review whether targeted Level 2 classification is necessary if experience demonstrates that these arrangements are insufficient.

R4 Strengthen Water And Environmental Implementation

Under Expectations 5 and 6, supplement annual water forecasts with peak demand, drought and climate resilience, supply limits and discharge characteristics. Establish measurable controls for noise, chemical releases, PFAS where relevant and contaminated firewater. Explicitly assess diesel emissions during testing, outages and any other proposed operation, including cumulative human exposure and relevant agricultural effects. Require appropriate equipment standards, operating controls and verification.

R5 Add Beneficial Waste Heat Reuse

Under Expectation 1, require early heat assessment, feasible implementation, proportionate future provision and reporting. Adopt the expectation now, including for existing facilities with an ultimate nameplate capacity exceeding 10 MW, and establish a lawful statewide framework with reasonable transition arrangements and proportionate duties. Appendix A, Sections A4 to A9, develops implementation and proposed wording; the policy statement alone cannot create these duties.

R6 Demonstrate Delivery Of The Electricity Expectations

Under Expectation 4, assess annual energy, firming, network capacity, timing and cumulative demand together. Verify additional generation, quantify enforceable flexibility and specify interim supply arrangements. Explain customer cost protection and residual public risks. Apply the implementation measures in Appendix B, Section B6, and commission a strategic assessment of Hydro's evolving role and competing objectives using Sections B4, B5 and the challenge questions in B7.

R7 Verify Benefits And Review Performance

Under Expectations 1, 2 and 7, establish measurable employment, procurement and community commitments, meaningful early engagement and proportionate public reporting. Disclose facility Scope 1 and Scope 2 emissions and operator totals across Australian facilities, with gross emissions and offsets reported separately. Coordinate with national reporting and advocate Commonwealth review of whether Safeguard coverage adequately addresses aggregate sector emissions. Publish implementation outcomes and set review dates and triggers.

Sources And Appendices

References to the Government draft use its printed page numbers. Appendices A and B use numbered sections A1 to A10 and B1 to B8 respectively. Cross references use section titles and recommendation numbers in the main submission. Source numbering is separate within each document.

[1] Tasmanian Government. Draft Expectations for Data Centres and AI Infrastructure Developers Tasmania. September 2026. Supplied consultation document. Overall approach and scope, pages 2 to 4; Expectations 1 to 3, pages 6 to 9; electricity, pages 10 to 12; water, page 13; approval pathways, page 14; reporting and review, pages 15 to 16.

[2] EPA Tasmania. Level 1 Activities. Explains the general allocation of responsibility between councils and EPA. https://epa.tas.gov.au/working-together/resources-for-local-government/tools-and-resources/level-1-activities

[3] EPA Tasmania. Standard Conditions and Definitions. Provides standard conditions and guidance on their adaptation by councils. https://epa.tas.gov.au/business-industry/regulation/regulatory-tools/standard-conditions-and-definitions

[4] Environmental Management and Pollution Control Act 1994. Section 24, particularly subsections 1, 1A, 4 and 4A. https://www.legislation.tas.gov.au/view/whole/html/inforce/current/act-1994-044

[5] EPA Tasmania. PFAS Contamination. Tasmanian context and management resources. https://epa.tas.gov.au/environment/land/area-wide-contaminated-land-issues/pfas-contamination

[6] Australian Government Department of Climate Change, Energy, the Environment and Water. PFAS National Environmental Management Plan. Refer to the current published guidance when undertaking an assessment. https://www.dcceew.gov.au/environment/protection/publications/pfas-nemp-3

[7] United States Environmental Protection Agency. Diesel Exhaust in the United States. Explains particulate and nitrogen oxide emissions. https://www.epa.gov/sites/default/files/2015-04/documents/dieselexhaustus.pdf

[8] United States Environmental Protection Agency. Ecosystem Effects of Ozone Pollution. https://www.epa.gov/ground-level-ozone-pollution/ecosystem-effects-ozone-pollution

[9] Greenhouse Gas Protocol. Scope 2 Guidance. Explains grid average and contractual accounting methods. Apply the current recognised guidance. https://ghgprotocol.org/scope-2-guidance

[10] Clean Energy Regulator. Assess Your Obligations. National Greenhouse and Energy Reporting thresholds. https://cer.gov.au/schemes/national-greenhouse-and-energy-reporting-scheme/assess-your-obligations

[11] Clean Energy Regulator. Safeguard Mechanism. Facility threshold and covered emissions. https://cer.gov.au/schemes/safeguard-mechanism

Appendix A Waste Heat Beneficial Reuse

Coordinated Appendix A Rev C. Sections A1 to A3 explain benefits, evidence and opportunities; A4 and A5 address coverage and legal implementation; A6 and A7 address assessment and delivery; A8 addresses reporting; A9 provides proposed wording for Expectation 1. Supports R5, with links to R1, R2 and R7.

Appendix B Electricity Demand And Hydro's Future Role

Coordinated Appendix B Rev E. Sections B1 to B3 address practical delivery and demand constraints; B4 and B5 examine the evolving electricity system and Hydro's role; B6 proposes implementation measures; B7 sets out challenge questions. Supports R6, with links to R1, R2, R4 and R7.

Prepared by John Pitt

E: [redacted]
M: [redacted]

Beneficial Reuse Of Data Centre Waste Heat

Appendix A

Executive Summary

Tasmania should require data centres to assess beneficial reuse of waste heat and implement opportunities that are technically, economically and environmentally feasible. A statewide statutory framework should provide simplified screening for smaller facilities and detailed assessment for larger ones. This appendix develops Recommendation R5 of the main submission and supports R1 on implementation, R2 on consistent assessment and R7 on reporting.

The proposed rule is technology neutral and location specific: *assess first, reuse where reasonably feasible, and explain why where it is not*. Universal coverage should be combined with proportionate obligations. The absence of a viable user today should allow an evidence based exemption from immediate implementation, subject to reasonable provision for future opportunities and review.

The Government should add the waste heat expectation under Expectation 1 immediately, including its application as a policy expectation to existing data centres with an ultimate nameplate capacity exceeding 10 MW. The Statement alone cannot create retrospective legal duties or alter existing approvals and contracts. Government should undertake a time limited legal implementation review and establish a statewide statutory duty where needed for consistent coverage. Existing facilities should have reasonable transition periods, with assessment before any requirement for retrofit. Sections A4 and A5 explain coverage and implementation.

A1 Why Beneficial Reuse Matters

Much of the electricity used by computing equipment is converted to heat. The recoverable quantity and useful temperature depend on equipment, cooling design, operating load and the point of recovery. Electrical input is not a reliable substitute for a measured thermal balance, and theoretical heat production is not the same as heat that can be delivered economically.

Beneficial reuse can reduce an existing user's energy costs, enable additional productive activity and reduce emissions where it displaces a more emissions intensive heat source. These are separate benefits and should be assessed separately. A new heat user does not automatically generate avoided emissions: the comparison must describe whether that activity would otherwise exist and how it would be heated.

The public interest extends beyond the data centre's own return. Accessible heat may improve the value obtained from electricity, industrial land and network investment. It may support jobs in complementary businesses. Such benefits depend on credible customers and infrastructure, and should not be included as assured benefits before delivery arrangements exist.

Cooling benefits may arise in some arrangements, but heat users can be seasonal or interruptible. The facility must retain reliable heat rejection. Any additional electricity for heat pumps, circulation and backup supply must enter the assessment.

A2 Evidence And Its Limits

The European Energy Efficiency Directive provides a relevant regulatory precedent. Article 26 addresses waste heat utilisation at data centres with total rated energy input exceeding 1 MW, subject to demonstrated technical or economic infeasibility, and provides for cost benefit assessment in the specified circumstances. Commission guidance explains its application. These are European requirements, not existing Tasmanian law. [1, 2]

Tallaght in Ireland provides an operating example of data centre heat serving nearby public buildings. The council describes the scheme as operating since April 2023 and records public funding contributions. It demonstrates the importance of nearby demand and coordinated investment; its economics cannot simply be transferred to Tasmania. [3]

My earlier Tasmanian Parliamentary Inquiry submission examined further examples involving district heating, horticulture, aquaculture and industrial applications. Those examples establish a range of possibilities rather than the feasibility of any particular Tasmanian proposal. Project status, delivered temperatures, recovery energy and commercial arrangements should be verified before relying on headline performance claims. [4]

A3 Tasmanian Opportunities

At industrial precincts such as Bell Bay, screening should consider existing low temperature process needs, suitable timber drying processes, controlled environment horticulture and aquaculture where the species and production system have a compatible heat requirement. Drying temperatures vary and some uses require substantial temperature upgrading. Aquaculture suitability requires assessment of biosecurity, water, markets and seasonal temperature needs.

Urban opportunities could include aquatic centres, hospitals, education facilities and suitable building clusters. District heating requires sufficient nearby demand, distribution infrastructure, customer agreements and a suitable business model. A cool climate helps create heating demand but does not establish commercial viability.

Precinct planning should examine heat producers and users together before land and cooling designs are fixed. Government can map plausible demand, identify corridors and convene prospective partners. It should avoid reserving scarce land for speculative heat uses without a credible development pathway.

Bell Bay's scale makes a documented assessment worthwhile. This appendix does not presume that a particular use is feasible or that heat recovery must be imposed through an existing permit. The immediate evidentiary question is whether a competent, transparent assessment has tested the available opportunities.

A4 The Coverage Problem

The draft Statement is expressly non statutory. Its scope also excludes small edge and enterprise facilities. Those exclusions may be proportionate for some expectations, but a new waste heat framework should define its own scope and screening rules so useful opportunities are not excluded by an administrative label. [5]

The Tasmanian Planning Scheme comprises State Planning Provisions and municipal Local Provisions Schedules. [6] Existing planning and environmental processes address many local impacts. Government should demonstrate which provisions impose heat assessment, feasible reuse and ongoing review across the sector before relying on them to deliver those outcomes.

A provision applying only in selected zones, an environmental referral applying only to certain activities, or a condition attached to public assistance can leave facilities outside coverage. The same problem arises if several separately proposed buildings escape a capacity threshold that the completed campus would exceed.

The legal gap should be established through a provision by provision review rather than a categorical assertion that no existing power is relevant. This is the waste heat component of the coverage review in main submission Section 3, Giving Expectations Practical Effect, and Recommendations R1 and R2. The preferred outcome is consistent coverage. If Government retains existing planning provisions, it should provide a separate statutory mechanism wherever current powers cannot deliver that coverage. EPA technical support or referral alone should not be assumed to create a duty to reuse heat.

A5 Recommended Regulatory Architecture

A5 1 A Separate Statutory Duty

The preferred approach is a statewide statutory duty on data centre operators, administered by a designated authority and coordinated with development assessment. The implementation review should determine whether enabling amendments to existing legislation or a dedicated Act are necessary. A regulation can only impose the proposed duties where its enabling Act authorises them.

For new development, require the assessment before material design commitments and a compliance decision before construction or operation at the relevant scale. The eventual legislation should specify the lawful decision point and relationship to planning and environmental approvals. For existing facilities, introduce reasonable registration, disclosure and staged assessment periods, avoiding automatic retrofit obligations irrespective of cost.

The mechanism should provide information powers, independent technical review, reasons for decisions, monitoring, proportionate enforcement and review rights. Statewide coverage should not depend on a council finding an indirect connection to unrelated planning criteria.

A5 2 Scope And Proportionality

Define a data centre by its function and include campuses, staged expansions, relevant leased operations and facilities serving enterprise needs. Require every facility to undertake a brief screening declaration, with a simplified process for very small installations. Detailed assessment should apply above a prescribed rated input threshold or where screening identifies a credible opportunity.

Use the European threshold exceeding 1 MW as a consultation reference, not an automatically appropriate Tasmanian limit. The proposed immediate policy expectation for existing facilities exceeding 10 MW does not define the permanent statutory threshold or exclude smaller facilities from screening. Define nameplate capacity and specify whether each trigger concerns total facility electrical input or computing load. Aggregate functionally integrated stages to avoid artificial fragmentation, consistent with main submission Section 3, Ultimate Development And Cumulative Effects, and Recommendation R2. Publish exemptions and reasons.

A5 3 Interim Implementation

Amend the Statement now and publish assessment guidance. Seek assessments from existing facilities with an ultimate nameplate capacity exceeding 10 MW. Apply appropriate contractual requirements through new or lawfully varied arrangements for discretionary assistance and public assets; do not assume existing contracts can be changed unilaterally. Commence the statutory review immediately and publish a timetable under Recommendation R1. Interim policy and contracts do not provide universal enforceable coverage.

A6 Required Assessment

The assessment should describe realistic commissioning and utilisation stages, seasonal operating profiles, heat flows, temperature, reliability and the fraction recoverable without compromising the primary service. It should identify credible users through a justified search area and record engagement, including why apparently promising uses were excluded.

Compare direct recovery and appropriate heat pump options, distribution losses, seasonal mismatch, backup requirements and additional electricity use. Examine capital and operating costs, infrastructure ownership, customer connection costs, heat pricing, contractual duration, equipment replacement and failure of either partner.

Assess both the commercial project and wider public effects, consistent with main submission Section 3, Economic Benefits And Public Risk. Use consistent discount rates, evaluation periods, energy price assumptions and sensitivity tests, with justified departures. Include the counterfactual heat source, emissions, water and environmental effects. If private returns are insufficient but wider benefits are positive, any public participation should be separately justified and its costs and risks disclosed. This does not presume government financial support for the data centre itself.

Require independent review for major facilities or disputed conclusions. A regulator should approve an exemption only on documented grounds, specify the assumptions supporting it and set a review date. Proponents should not establish infeasibility merely by choosing a site or cooling design that forecloses an otherwise reasonable option without examining alternatives.

A7 Implementation And Future Provision

Where an opportunity is feasible, require a delivery plan identifying the thermal service, parties, milestones, performance measures and responsibilities. The legal mechanism should distinguish an operator's controllable duties from investment by an independent heat customer. It should provide an orderly response if the customer withdraws or the circumstances materially change.

Where immediate reuse is infeasible, assess proportionate measures such as space for heat exchangers, accessible connection points and pipe corridors. Do not require expensive equipment without a credible need. The decision should document the cost and option value of preserving future access.

Require reassessment at substantial expansion, major cooling replacement or a material change in nearby demand, and periodically at an interval set through consultation. Accepted exemptions should not become permanent despite changed circumstances.

A8 Reporting And Verification

Annual reporting for facilities subject to detailed assessment should identify total heat generated on a defined basis, recoverable heat at stated temperatures, heat exported, heat received by users and additional recovery electricity. Report availability and actual use so a large theoretical resource does not obscure negligible delivery.

Distinguish useful heat delivered from upgraded output that includes heat pump electricity. State the denominator for any reuse percentage and the metering boundary. Estimate avoided emissions against a disclosed counterfactual and identify which party would otherwise have emitted them. Report these estimates separately from the operator's gross Scope 1 and Scope 2 inventory and disclose additional recovery electricity. Avoid duplicate claims for the same avoided emissions. This aligns with main submission Section 3, Facility And Company Carbon Reporting, and Recommendation R7; heat reuse does not establish compliance with the Safeguard Mechanism.

Publish decisions, exemptions, key assumptions, delivery milestones and non sensitive outcomes. Protect genuinely sensitive customer or security details through targeted redaction. The designated authority should verify material results and publish aggregate sector performance through the reporting framework proposed in main submission Section 3, Community Engagement And Reporting, and Recommendation R7.

A9 Proposed Addition To The Statement

Data centre and AI infrastructure proponents should assess opportunities for beneficial reuse of waste heat early in site selection and design. Assessments should quantify recoverable heat and its temperature and availability, identify credible users, and evaluate technical, economic and environmental feasibility using published guidance.

Where feasible opportunities are identified, proponents should implement them through a delivery plan. Where immediate reuse is not feasible, proponents should explain the reasons and assess proportionate measures preserving future opportunities. Operators should report actual recovery and reuse and review the assessment following material changes.

The Government should establish an enforceable statewide framework to give effect to these requirements, with obligations proportionate to facility scale and opportunity. The expectation should also apply to existing facilities with an ultimate nameplate capacity exceeding 10 MW, supported by reasonable transition arrangements under the eventual lawful mechanism. The Statement itself does not create statutory duties or reopen existing approvals.

A10 Sources And Verification Notes

[1] Directive (EU) 2023/1791, Article 26, especially paragraphs 6 and 7. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32023L1791

[2] European Commission Recommendation (EU) 2024/2395 on interpretation of Article 26. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202402395

[3] South Dublin County Council, Spotlight Tallaght District Heating Scheme. https://www.sdcc.ie/en/climate-action/spotlight-tallaght-district-heating-scheme/

[4] John Pitt, Data Centre Inquiry Submission, supplied September 2026, waste heat analysis and supporting references. This appendix develops its policy architecture rather than reproducing every case study.

[5] Tasmanian Government, Draft Expectations for Data Centres and AI Infrastructure Developers Tasmania, September 2026, printed pages 3 and 14 to 16.

[6] Tasmanian Government, About the Tasmanian planning scheme. https://www.stateplanning.tas.gov.au/planning-system/tasmanian-planning-scheme/about-the-tasmanian-planning-scheme

NB This draft recommends a mechanism; it does not assert that an existing regulator already possesses every required power. MW means megawatts. Heat should be reported in thermal MWh, meaning megawatt hours of thermal energy.

Electricity Demand And Hydro Tasmania's Future Role

Appendix B

B1 Can Hydro and TasNetworks Deliver The Government's Expectations

They may be able to, but the answer depends on how much new demand is added, where it connects, when supporting supply arrives and how much demand can be reduced during difficult periods. The Statement's objectives are supported. What is missing is a clear account of the conditions under which they can all be met, and what Government will do when they compete. [1]

The expectations ask new data centres to support additional renewable generation, protect existing customers, preserve energy security, pay appropriate network costs and avoid restricting Hydro's broader market opportunities. These outcomes can reinforce one another. A well timed, flexible customer can help finance new generation and make better use of infrastructure. They cannot, however, be assumed to remain compatible at every level of demand.

Hydro can assess supply and firming arrangements. TasNetworks can assess connections and the network work needed. Neither can deliver all the outcomes alone: new generators, developers, market bodies and Government also have responsibilities. A connection approval does not establish that sufficient electricity will be available through a dry year. A profitable electricity contract does not establish that Tasmania has obtained the best use of its resources.

The practical task is to establish how much additional demand can be supported under stated conditions, identify when further demand requires investment or restrictions, and make any remaining public policy tradeoffs explicit. That assessment must change as Tasmania and the wider National Electricity Market evolve.

This appendix develops Recommendation R6 of the main submission. Section B6 explains implementation under the existing approach, with links to R1 on accountability, R2 on coordinated assessment and R7 on reporting. Section B7 sets out challenge questions for the strategic assessment of Hydro's future role. Waste heat recovery is developed separately in Appendix A; any additional electricity needed for recovery should be included in the demand assessed here.

B2 What Would Have To Be Delivered

Enough Electricity Across The Year

Hydro describes Tasmania's current system as broadly in annual energy balance. Its published assessment of Firmus's potential 444 MW request says additional generation would be needed. The webpage, dated 27 August 2026, reports that no decision on that request had been made. [2]

New wind and solar can add energy and allow Hydro to conserve water. Their installed capacity is not their continuous output. The assessment needs expected production, seasonal patterns and delivery dates, rather than a simple ratio of renewable megawatts to customer megawatts.

Enough Supply When Wind And Solar Are Low

Firming means filling the gaps when other generation is insufficient. Hydro can generate when needed, but the water available for that purpose is finite. A larger turbine can release water faster; it does not increase rainfall. A battery can shift electricity to another time; its contribution depends on how much energy it stores and whether it can recharge.

The important question is how long the system can meet its commitments during low inflows, low renewable output or an interconnector outage. Covering annual consumption with renewable contracts does not answer that question.

A Network That Can Deliver The Electricity

TasNetworks must consider the location of generation and customers, line and substation capacity, equipment failures and the services that keep voltage and frequency stable. Its planning report already identifies location dependent constraints and corrective investments. [3]

There may be enough generation across Tasmania but insufficient capacity along the route to a particular customer. Conversely, a strong local connection may exist while reliable supply for the new demand remains unresolved. The two assessments need to be coordinated.

B3 At What Level Of Demand Do Tradeoffs Arise

There is no defensible single statewide megawatt threshold in the public information reviewed for this appendix. The limit is a combination of annual energy, dependable supply during adverse periods and capacity at particular network locations. It also depends on commitments already made and the flexibility of new customers.

The scale nevertheless matters. The following arithmetic illustrates annual consumption at 90 per cent average utilisation of the stated electrical load. It is not a forecast of any developer's consumption or a finding about available capacity.

New Electrical Load MW	Annual Electricity TWh	Share Of 2024 Tasmanian Consumption
50	0.39	4%
100	0.79	7%
200	1.58	14%
300	2.37	22%
444	3.50	32%
500	3.94	36%

Calculation: MW × 8,760 hours × 0.90 ÷ 1,000,000 = TWh. One TWh is one billion kilowatt hours. TasNetworks reports approximately 10.98 TWh of Tasmanian consumption in 2024. Percentages compare scale with that historical year; they are not forecasts of future market share. [3]

A 444 MW customer with additional generation commissioned alongside its load may be easier to accommodate than a smaller inflexible customer starting before its supply. The published Firmus request is therefore a reason for detailed assessment, not proof that the system either can or cannot supply it.

A Published Local Trigger

TasNetworks' 2025 planning summary states that new load exceeding 210 MW connecting to George Town Substation would require reliability corrective action, including measures addressing a major outage risk and voltage stability. [3, p. 9]

That figure is a local network trigger under the report's assumptions. It is not a statewide ceiling, a firming limit or proof that a particular project cannot proceed. TasNetworks should explain how current proposals and their combined demand relate to it, what corrective work is needed, and when that work can be completed.

How The Tradeoffs Would Appear

Initially, new demand may use available capability and improve asset utilisation. As commitments grow, further demand may require additional supply, stronger connections, more customer flexibility or a slower start. If these measures are insufficient, decisions may involve competing uses of stored water, industrial electricity, exports and reserves for difficult periods.

For example, reserving more water for a firm customer can reduce the water available for exports during a valuable market period. Requiring that customer to reduce demand can preserve those opportunities, but affects the service it can offer. Building extra capacity can ease the conflict, but creates costs, environmental impacts and delivery risks. These effects must be assessed against the situation without the new commitment.

The assessment should therefore report ranges of additional demand that can be supported before and after specified investments, under normal and adverse conditions. It should identify the first constraint reached, the measures that would relieve it and the costs and risks of doing so. Proposed projects should be tested cumulatively, without assuming every proposal will proceed.

B4 The Wider Electricity System Will Change The Answer

Tasmania is part of the National Electricity Market, or NEM. AEMO's 2026 Integrated System Plan describes a transition from retiring coal generation towards renewables, storage and expanded networks, with gas retained for backup. It also anticipates growing electricity demand. This is a planning pathway, not a guarantee that all infrastructure will arrive on schedule. [4, 5]

More Renewable Generation

More Tasmanian wind and solar can reduce the need to release hydro water when those resources are producing. More mainland renewables may also provide attractive import opportunities. But abundant electricity at some times does not establish adequate supply at all times. New demand and delayed construction can absorb the apparent surplus.

More Interconnection

Greater interconnection can let Tasmania import when mainland supply is plentiful and export when its electricity is more valuable. AEMO's plan includes a 750 MW first stage of Marinus, with full capacity timing advised by the proponent as December 2030. That is a planning assumption to test, not capacity available today. [4, p. 99]

Additional transfer capacity could conserve water and widen Hydro's market. It could also expose Tasmania more directly to mainland scarcity and competing export demand. A cable provides a route for electricity; it does not guarantee affordable electricity at its other end. Assessments must include outages and periods when Tasmania and the mainland face stress together.

More Storage And Flexible Demand

AEMO distinguishes storage that shifts supply within a day from deeper storage supporting longer renewable shortages and seasonal needs. Its plan retains an important role for existing hydro alongside new batteries and pumped storage. [4, pp. 83 to 87]

As other storage expands, some of Hydro's present services may become easier to buy elsewhere. Batteries and flexible customers could reduce pressure on Hydro during short gaps. Longer shortages may still require substantial stored energy. Pumped storage can replenish its upper reservoir using electricity, but depends on available charging supply and loses energy in the process.

These changes could make Hydro both more useful and more exposed to competition. They must be considered together. It would be unsafe to assume either permanent scarcity of every Hydro service or a future in which national renewable abundance makes Hydro unnecessary.

B5 How Hydro's Role Might Change

Now And During The Build Out

Hydro remains a generator and a major source of dependable supply for Tasmania. During the transition it may also help new wind and solar projects secure customers by filling their supply gaps. Its central challenge is to manage new commitments while preserving water and flexibility for existing users and difficult conditions.

Firmus illustrates this stage: substantial prospective demand arrives while supporting generation, network works and operating arrangements are still being assessed. Its significance lies in that timing and scale. It does not by itself establish the direction of Hydro's institutional future.

In A More Connected System

Hydro may increasingly manage a combination of local generation, imports, storage and exports. It could conserve water when other supply is plentiful and release it when the combined system needs it most. TasNetworks would need to plan for changing flows, including occasions when imports, local demand and renewable production place different pressures on the same infrastructure.

Large customers could help this model if they can move consumption to favourable periods or reduce it during stress. A promise of flexibility needs to specify the amount, notice, duration and frequency of reductions. Customer backup equipment should count only to the extent that its contribution is available and verified.

In A System With Much More Competing Storage

Hydro may become more selective about the services it provides. Its strongest role could shift towards longer supply gaps, seasonal water management, system support and resilience, while other resources meet more routine needs. The extent of that shift will depend on cost, location, storage duration and access to transmission.

Strategic importance and profit need not move together. Competing storage may reduce some trading margins even while Tasmania values Hydro's ability to withstand rare shortages. Long contracts may provide revenue certainty, but also commit capability that could have a different value later. Neither effect should be assumed to dominate without modelling.

Government should clarify which services Hydro is expected to provide commercially and which public safeguards it must maintain. The options include clearer obligations within the current model or separately specified and funded public services. A broader review should compare these options before recommending institutional change; public ownership alone does not resolve the competing objectives.

B6 Making The Statement Work In Practice

The Statement can remain focused on outcomes and existing processes. Its practical strength would come from clearer evidence requirements, responsibilities and agreements, proportionate to each proposal's effects. This gives effect to main submission Section 3, Giving Expectations Practical Effect, and Recommendations R1 and R6. The policy statement itself does not create new legal duties; commitments must be secured through the applicable lawful instruments. [1]

Additional Generation And The Timing Of Demand

Under expectations 4(a) and 4(d), identify the additional generation relied upon, expected production and delivery milestones. Before each demand stage begins, demonstrate that supply and network requirements are met or acceptable interim arrangements exist. Allocate responsibility for delays and agree what happens when milestones are missed. Assess the ultimate campus and foreseeable stages consistently with main submission Section 3, Ultimate Development And Cumulative Effects, and Recommendation R2.

Firming And Energy Security

Under expectations 4(b) and 4(e), assess Hydro availability after existing and cumulative commitments. State the security standards being applied and test dry periods, extended renewable shortages and interconnector failure. Preserve the general option of using existing Hydro firming, but do not treat it as an unlimited entitlement. Where limits emerge, examine new firming, stronger flexibility, staging and other alternatives.

Demand Management

Under expectation 4(c), quantify any flexibility relied upon and secure it through appropriate agreements. Test repeated events, backup duration, fuel constraints and the demand that returns afterwards. Assess backup fuels for their practical contribution rather than assuming a dependable service. Where diesel or other combustion is proposed, account for authorised operating limits, local air pollution and greenhouse emissions, consistent with main submission Section 3, Local Diesel Emissions, and Recommendation R4. Equipment should not be credited with a system service it cannot lawfully or reliably deliver.

Network Costs And Existing Customers

Under expectations 4(f) and 1(d), support early TasNetworks engagement, siting that uses available capacity and recovery of appropriate connection and network costs. Explain how shared network costs, stranded infrastructure risk and effects on existing customers will be assessed within the applicable national framework. TasNetworks distinguishes regulated shared transmission services from negotiated connection services; the Statement should recognise that distinction. [6]

Payment of a connection bill does not by itself prove there will be no wider effect on electricity prices. Government should define the comparison used to assess customer impacts and distinguish costs caused by the development from costs that would arise anyway. Where an adverse effect cannot be avoided, it should be identified and resolved rather than hidden within a general assurance.

Responsibility And Reporting

Under expectations 6 and 7, explain who brings together the supply, network and public benefit assessments. Main submission Section 4, Common Guidance And Coordinated Assessment, and Recommendations R1 and R2 propose coordination among the relevant authorities and infrastructure providers while preserving their independent decisions. Local environmental assessment and EPA technical support do not themselves resolve strategic electricity allocation or Hydro’s public objectives.

Publish aggregate system findings and report actual demand, renewable delivery and performance against flexibility commitments, while protecting justified confidential information. Align disclosure with main submission Section 3, Community Engagement And Reporting, and Recommendation R7. Define reporting boundaries, responsibility and verification so promised flexibility and generation can be compared with delivery.

Electricity system analysis and corporate emissions accounting answer different questions. Main submission Section 3, Facility And Company Carbon Reporting, proposes Scope 1 and Scope 2 disclosure, with grid average and qualifying contractual results for purchased electricity. The analysis here should separately test changes in generation, imports, exports and stored water against the situation without the new demand. Renewable certificates do not alone establish those consequences. National reporting and the proposed Commonwealth Safeguard review are addressed in the main submission; they do not replace the security and customer impact assessment required here.

B7 Questions For Government Hydro And TasNetworks

1. How much additional demand can be supported now, and after specified investments, while meeting all the Statement's electricity expectations?

2. Which constraint is reached first in each case: annual energy, supply during adverse periods, network capacity or system stability?

3. What does "spare capacity" mean after existing obligations and an explicit margin for security have been allowed for?

4. How do current proposals, together, relate to the George Town network trigger and other local constraints?

5. What generation and network milestones must be met before each load stage begins, and who bears delay risk?

6. What customer demand reductions are dependable for hours, days and repeated events, and how will they be secured?

7. How do the results change with delayed Marinus, different mainland storage growth, low inflows and simultaneous mainland shortages?

8. What are the effects on existing customers, Hydro returns, exports and future Tasmanian industries compared with proceeding without the new commitment?

9. At what point do the expectations compete, and who decides between further investment, customer restrictions and other uses of the capability?

10. What public reserves or services should Hydro maintain, how are they paid for, and how are they distinguished from commercial commitments?

11. How should major contracts and Hydro investment decisions adapt as other generation, storage and interconnection develop?

12. What findings will be published, when will assessments be updated, and how will they influence subsequent commitments?

B8 Sources And Analytical Assumptions

[1] Tasmanian Government, Draft Expectations for Data Centres and AI Infrastructure Developers Tasmania, September 2026. Supplied consultation document, especially printed pages 3, 7 and 10 to 15.

[2] Hydro Tasmania, Hydro Tasmania and Firmus Technologies. Webpage last updated 27 August 2026; accessed 5 October 2026. https://www.hydro.com.au/hydro-tasmania-and-firmus-technologies

[3] TasNetworks, Annual Planning Report 2025 Summary, especially printed pages 5 and 9. Historical consumption and the George Town trigger are used with their stated dates and scope. https://www.tasnetworks.com.au/Documents/Manual-documents/Planning-and-upgrades/APR/TasNetworks-Annual-Planning-Report-Summary-2025

[4] Australian Energy Market Operator, 2026 Integrated System Plan, 25 June 2026, especially printed pages 83 to 87 and 99. https://www.aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2026-integrated-system-plan-isp

[5] Australian Energy Market Operator, 2026 Integrated System Plan Explainer, June 2026. Available from the publication page cited in [4].

[6] TasNetworks, Regulated Transmission Pricing, accessed 5 October 2026. https://www.tasnetworks.com.au/Poles-and-wires/Pricing/Regulated-Transmission-Pricing

The load calculations are illustrative. The possible changes in Hydro's role and proposed decision framework are analytical propositions for testing, not forecasts or findings that a particular project is feasible or infeasible. AEMO planning assumptions and the 2025 network report require updating for project decisions. Main submission cross references use section titles and recommendation numbers; this appendix uses numbered sections B1 to B8. Source numbering is separate within each document.