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Response to the Inquiry into AI Data Centres in Tasmania:

Dr Brian Bowring AM

Summary of recommended legislation and regulation needed for this new industry.(explanations below)

Issue	Regulation	Legislation	Determined by	Administered by
Location	Specific extra local variations allowed for State Planning Authorities as well as legislation	Restricted areas only such as Heavy industrial zones and area that is marginal for housing or agriculture	State or Commonwealth	State Planning authority zoning and then decisions with local councils
Electricity	Parallel construction of new renewable sources	The amount of new renewable in relation to total demand	State	State power authority
Water	Regulations based on the general or average amounts used by industry and commercially in this state	Water availability can't be generalised nationally but an in principal "no local harm" to environment or populations	State regulation based on Principals by Commonwealth	State water authority
Natural (air and water). Environmental	No	As per state legislation	State	State environmental protection agency
Industrial related effects - noise and light pollution	Standards of lumens and distance /direction		Local Government	Local Government
Usage of the AI technology	Minimal	Clear legislation that is easily amend with the rapid development of this technology	Commonwealth with State Input	Commonwealth
Amount of Training and upskilling of Tasmanians	Possibly?	Unlikely?	State	State

Below is my response to the Terms of Reference:

Inquire into and report upon the construction and operation of AI data centres in Tasmania, including recommending future legislation and regulations necessary to:

Protect public resources and the environment;

The most common resource and environmental concerns expressed by Tasmanians on social and mainstream media include electricity power supply and water usage along with perhaps lesser concerns re pollution and noise and light pollution. Overseas data centres are also opposed on the basis of electromagnetic radiation.

The use of **coal, gas and diesel generator power** are very legitimate concerns and require a definitive commitment to the use of renewable energy. The complicating factor with this is the time frame required to establish the renewable infrastructure. A clear and definitive plan with clear timelines and benchmarks and penalties need to be in place. Diesel generators may be unavoidable assets for extremely limited use in network failure or when the energy provider requires the centre to reduce demand so that the public is supplied in unplanned extreme circumstances. The use should be in fact negligible and regulation controlled. Requiring parallel construction of renewables to a realistic level before operation can start would be logical. (in view of the construction timeline and component supply and availability capacity involved).

Water demand is substantial in currently operating AI centres. The current *Firmus Bell Bay* proposal uses new technology where water usage is an amount equivalent or in fact much less than many small industrial or even hospitality businesses. A benchmark comparing a size of a facility to businesses such as a Hotel or hospital or aquaculture facility re water usage should be determined and used in assessing the quantum amount available to be used of this finite resource. Legislation to ensure there is no harm to the environment or the population is required.

Electromagnetic radiation has been cited as an issue due to the high voltage and amount of electricity used. The concerns largely relate too the transmission infrastructure and peer reviewed studies have shown significant medical effects from living under high voltage transmission lines. TasNetwork is aware of this and already mitigates for this effect. The private infrastructure that data centres are being required to pay for and build, need to have clear measurable and frequently audited radiation mitigation strategies.

Noise pollution and light pollution are issues cited with existing data centres, generally in relation to those that are poorly situated in or close to residential areas. If Data Centres are located in heavy industrial zones this should not be a concern although personally as a resident of South George Town the noise from TEMCO, Timberlink and Bell Bay Aluminium is always appreciable outside at night especially. The glow from that industrial focus is visible from 30 and more kilometres away, where it is actually brighter than that from George Town itself.

Ensure Tasmania's Resource Management and Planning System adequately recognises and addresses the specific impacts of the development and construction of AI and data facilities;

The rapid establishment of Data centres in mainland cities in the midst of small industry and commercial zones with neighbouring residential zones has been totally inappropriate and has fuelled a substantial push back by the general population to all data centres as a generalised opinion.

Adequate planning regulations confining data centres to land zoned as heavy industrial should resolve this concern. This however in turn creates further concerns, if this means that rural and smaller regional towns are the logical sites, thereby compromising limited water supplies and electricity transmission infrastructure that is often aged and in poor repair and unreliable. Regulations that have defined water supply and electricity (reliability and capacity) supply are essential. The restriction to heavy industrial areas may solve these issues.

Provide Parliamentary oversight and accountability for new facility construction and resource allocation;

There is a significant amount of hysterical overreaction to the establishment of data centres fuelled by what is old information in this rapidly advancing technology, with substantial new innovative developments occurring, to mitigate the water consumption and environmental effects. To address this action is needed for regulation / legislation controlling water use and effluent containment, so that factual Tasmanian relevant information is available. The use of large amounts of electricity can't be mitigated and regulation requiring the establishment of equivalent renewable generation is essential for public concerns to be addressed.

The demand for stringent Parliamentary oversight from the public is fuelled as much by the potential of AI as the physical asset delivering it. There are also legitimate reasons for opposition and concern related to the pace of establishment and incorporation in people's lives of AI and the impact of the potential and real unethical use of the technology. The fact that Tasmania's major supermarkets and hardware store are examining the establishment of facial recognition via AI is a reasonable trigger for this anxiety. This concern results in the quandary whereby concerns re establishment of AI data centre infrastructure must be separated from the concerns re the usage of this infrastructure. This impact must be addressed but it is more of a national regulatory issue for the Commonwealth Government level with adequate input from the states and territories. *This is not a matter for planning and assessing if a centre meets state criteria.*

Ensure transparent public disclosure of resource consumption;

Setting benchmarks for renewable power supply and water usage, environmental discharge etc are discussed above. Unfortunately the release of data that should be in the public domain re utilisation of what is public infrastructure is often cloaked by the "commercial in confidence" clause. For true transparency and ability to make informed judgements by the Tasmanian electorate, details of the amount and comparative price of water and power supplied needs to be widely distributed. Clear explanations of the reduced price for bulk delivery of power and water to the factory gate after which they have to have switchyards and distribution networks needs to be included in this information.

Provide the Tasmanian community with adequate opportunities for consultation;

The Tasmanian community today is not being afforded the opportunity for adequate and effective consultation in my view, *solely because of the lack of clear factual relevant evidence based information* that is readily and easily available about the data centres being proposed in Tasmania. Instead social media "slop" or irrelevant old or poorly explained and non evidence based information that is not referenced as to the source is regurgitated by opponents. The last minute attempt by the current *Firmus* proponent when the George Town Council delayed their ruling by two weeks was seen for what it was, a botched attempt at consultation, and that is totally inadequate.

The public knowledge of other industries and technologies is generally well known and there is enough correct factual knowledge that can be shared to allow some consideration re the location and conditions required for industries such as aquaculture, abattoirs, quarries and mines etc, but often there is misinformation and the tension between industry provided information and timely independent review information complicates communities ability to digest large proposals.

Tasmania in particular has a history of polarised opinions and actively opposing some developments such as the large hydro dams of the 60's, in which case the sides were largely divided into those that valued the wilderness more than the economic and development opportunities of renewable hydro electricity. In that example the lines of debate were clear cut.

There is a similarity in the public mind where some have an opinion the infrastructure is safe with regulation and very vocal community members that have a blanket no opinion, as it is all too fast to complex and are scared by the rouge and potentially exploitive use of this technology.

Education and independent analysis and clear easy to understand explanation of the proposal must be mandated to be provided when novel and innovative enterprises are proposed and must be incorporated into a proponents work up of an application for planning approval. All reasonable concerns should be address at this stage before the matter comes to the table for decision.

Ensures the Tasmanian community receive tangible benefits from all AI and data facilities constructed in the state; and

The expected tangible benefits must be realistic and community expectation needs to be tempered in the process of education re new technology .

With regard to employment levels smelters at Bell Bay have seen a massive reduction in the workforce levels required with efficiencies and reduction in manual handling etc. The workforces are now approximately half of their initial levels. These industries were introduced to both use abundant power and provide a high level of employment. AI data centres will probably follow the same trajectory but that do require a significant workforce and will have flow on employment for local service industries but not at the same level of the smelters.

There is a body of opinion that the ongoing supply of discounted electricity to keep legacy nearing the end of life infrastructure industries viable , must gradually be phased out as the cost of the subsidy flows on to all other consumers. This discounted supply is not in the current AI Data centre models proposed and should not be so in the future

The introduction of data centres provides the opportunity for training and skill increases for Tasmanians. There are suggestions from *Firmus Bell Bay* that there are a lot of relevant skill sets in the current population (currently employed and recently unemployed @ TEMCO) that with minor upskilling could easily transfer. There is also opportunity to be at the development level of these mega computers. Whether this is a regulation requirement or not is a question for decision.

Attracting clean industry, in the right places using the right amount or type of resources is essential if the Tasmanian economy is to ever recover from its current stagnation. The days of labour intensive industry is well and truly past and adoption of new technology signals to developers a State that is open for new and innovative business. In the case of Tasmania where freight costs are substantial, an industry that requires no ongoing raw materials and has no solid material to export must have significant logical appeal.

Other comments:

The current controversy over proposed AI data centres is a mix of debate over the physical nature of data centres such as location, power and water and the technological uses and rapid inculcation into peoples daily lives of this technology.

I strongly feel the two need completely seperate considerations. The Physical is absolutely a state mater and should be the focus of this review. The technological use of AI is a Commonwealth matter that needs strong and informed State and Territory Input. The distinction should be very clear in the aims of the review.

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