



AI LABS AND PROPOSED NATIONAL RULES:

GETTING IT RIGHT BY ADDRESSING THE BIG ISSUES FIRST

The Australian Government released a discussion paper on its proposed national rules for AI labs training frontier models in Australia on 18 September - *Getting it right: Building AI infrastructure that works for Australia*. This submission is a response to that request as part of the project on AI Consequences for Australia.¹

That paper is structured in 3 parts:

- Part 1 – Managing growth in large data centres and the AI training opportunity.
- Part 2 – Requirements for large data centres.
- Part 3 – Conditions for AI training.

There are 57 consultation questions listed across 11 areas, with submissions closing on 9 October. In view of the tight time constraint, the comments below focus on the three parts of the paper. However, before these are directly addressed it is important to acknowledge the mandatory standards to be required and the coordination challenge. It is also important to recognise the need for AI sovereignty and resilience, which is discussed in closing.

The Mandatory Standards

The Commonwealth's mandatory standards will require large data centres to:

- Bring forward new renewable generation to fully offset their energy demand (with appropriate firming through gas, batteries or hydro), with jurisdictions able to use state-owned generation, transmission and distribution where it has clear benefits to grid stability and lower customer prices.
- Provide demand flexibility.
- Operate in ways that minimise costs for businesses and consumers.

However, it is not simply a matter of laying these out as the Government has; it must also verify that the large data centres actually deliver and ensure that there are consequences for non-performance. It is up to the Australian Government to determine the numbers and scale of data centres needed to support AI capabilities, whilst ensuring that meets the nation's needs, and that they are socially and environmentally sustainable. A laissez faire economic

¹ See <https://www.socialcyber.co/social-cyber-institute/ai-consequences-for-australia>.

model for data centres (where real estate developers or AI companies drive the choices) will not be in Australia's national interest, nor will it be sustainable. That means the location, numbers and scale of data centres should be aligned with Australia's demand, and not only with the choices being made by the AI companies.

Data centres must be considered as critical national infrastructure, with Government policy influencing the planning and investment in addressing the nation's increasing requirement for AI and cloud computing (as Generative AI and large-scale machine learning require high compute power and storage), digital transformation (with businesses increasingly relying on cloud platforms, driving local data processing needs), and edge computing (reducing latency for IoT, autonomous vehicles, and high-quality streaming, necessitating regional facilities).

The Coordination Challenge

It is important to acknowledge that data centre growth is as much about coordination as it is about infrastructure. Data centre approvals, transmission planning and renewable energy zone development are currently undertaken through separate processes across federal and state jurisdictions. There is no overarching framework that systematically aligns large new data centre loads with the timing of new generation and transmission delivery.

This creates the risk that large data centres and supporting energy systems progress on different timelines. Transmission investment decisions can lag data centre development timelines, and renewable projects may be delayed by network and supply challenges. The constraint is the speed and integration of total infrastructure delivery.

Hence, Australia's AI standards must provide a simple and consistent regulatory approach to increase clarity, speed up approvals, and streamline compliance, while promoting investment. Large data centres must be aligned with broader national priorities, and thus implementation of the standards will be key. However, it is not just about Australia's "expectations" as data centre investment is significant and investors themselves have emphasised the importance of regulatory certainty and grid readiness.

As the United States Studies Centre has pointed out², aligning the new AI standards and the expansion of large data centres with renewable and transmission planning, reducing approval times, and accelerating enabling infrastructure will be critical to incentivising investment consistent with national interests. Australia must coordinate infrastructure delivery alongside data centre growth if it wishes to capture the anticipated productivity gains of AI. Co-ordination within and across governments, partnered with industry and community, is of the essence.

² <https://www.ussc.edu.au/powering-the-cloud-data-centres-and-the-future-of-australias-grid>

Part 1 - Managing Growth in Large Data Centres: Comments

The growth in data centres will place unnecessary costs on other electricity users such as households and businesses unless the large data centres are required to operate smarter, by differentiating between services that need to run all the time and those that can run only when required. AI model training, batch analytics, backups and offline inference, can be shifted to times when the load is less and still meet their required completion deadlines.

Shifting some of these services away from the small number of hours when electricity is scarce and expensive would benefit the large data centres as well as these other users. Monash University has carried out some useful modelling in this regard.³

Committing large data centres to this flexibility while their facilities are still being designed would realise greater benefits than if that flexibility is phased in gradually as the data centres evolve or after they have been built. Job-scheduling software is already available and could be standardised across the industry. The institutional issues are more problematic but need to be addressed, such as designing connection agreements, incentives, and accountability arrangements so that flexibility can be assured when it is needed. Well-coordinated scheduling must be paramount if the benefits are to be realised to their maximum.

The Federal Government should seek to reduce the infrastructure and wholesale-price pressures created by rapid data-centre growth by:

- Ensuring that connection frameworks for new large data centres recognise and reward flexible capability and that those data centres declare what flexibility they can reliably provide. Workload flexibility could even be recognised as a compliance pathway.
- Securing those commitments to flexibility while facilities are being designed rather than waiting until they have been built.
- Moderating the commitments, such as applying them to a minority of workload, allowing relatively short completion windows and action, and limiting this to a small number of critical hours.
- Maximising the potential contribution of large data centres by addressing how their batteries, uninterruptible power supplies and standby generation can support the wider power system.
- Ensuring follow-through by crediting the large data centres on their promised flexibility, which would be tied to the amount of infrastructure being built, verifying those promises against actual delivery, and ensuring consequences for non-performance.

³ <https://lens.monash.edu/data-centres-are-booming-a-little-flexibility-could-save-australia-billions/>

Part 2 - Requirements for Large Data Centres in Australia: Comments

The main requirements for large data centres in Australia to contribute positively to Australia's energy transition, sustainability goals, and national security have been made clear, and are in summary:

- Energy efficiency to minimise energy demand and emissions. The Commonwealth must set minimum standards to support transparency and drive efficiency for data centre energy use. [How power is sourced].
- Efficiency in water use. Efficient cooling technologies, non-potable water and recycled water opportunities must be prioritised; operational resilience must be built in to mitigate the impacts of water disruptions; and actual water use must be reported. [How water is used].
- Minimising the effect of new data centres on local communities, ensuring they are appropriately sized and appropriately located, away from homes, schools and potential housing or agricultural sites; ensuring communities do participate in planning and assessment processes; and drawing on local suppliers and content where possible. [How land is used].
- Accepting all grid connection costs and not passing them on to businesses and consumers. This includes managing grid-connected energy consumption during peak periods; promoting fair and equitable pricing of power purchase agreements; and covering transmission costs, network and other utility services costs so that prices do not increase for other energy and water users as a result of data centre activity.
- Underwriting renewable power supplies to meet their energy needs. This includes data centres accepting the renewable electricity obligation to gradually increase the share of their electricity use that must be matched with certificates from new renewable electricity capacity; and encouraging renewable electricity to be available when it is needed most by data centres matching their electricity use during certain periods.
- Carrying out environmental due diligence, including securing additional renewable energy supply, meeting costs imposed on electricity networks, and ensuring access to 'firmed' energy resources.

Part 3 - Conditions for AI Training: Comments

The government has announced its AI consumer safety and regulatory priorities including: A Digital Duty of Care, strengthening privacy protections, regulation of Automated Decision Making within federal agencies, AI safety in the workplace, and examining consumer risks including agentic commerce and retail surveillance pricing.

Domestic AI model development and large-scale AI training in Australia are important for several reasons centring on research, skills, attracting investment, and being able to influence the further development of AI systems and ensuring their resilience; however, this will necessitate a review of, and adjustments to, current policies, and regulations. This should be subject to a separate Parliamentary review, ideally informed by priority analysis from the new Australian Tertiary Education Commission to ensure all higher education and all vocational education and training roles are reflected.

Closing Comment on AI Sovereignty and Resilience

AI sovereignty and resilience demands a strong partnership and whole-of-nation alignment across government, academia, the private sector, and the public if Australia is to maximise public value, ensuring we have expertise in AI research, ethical governance, strong policy development, and the national will to build and operate robust sovereign AI systems.

But it's not just about building and deploying AI systems, it must also be about our ability to govern and adapt them as things evolve and do so in a way that serves national interests. We must maintain control over the layers of the AI stack that are most critical for resilience – the data, and inference capacity.

Furthermore, by working with like-minded nations, leveraging their strengths to create a resilient AI ecosystem that supports our critical industries and gives us some form of autonomy, we can meet the requirement for AI sovereignty and resilience.

Minimising strategic dependencies as we build our national capability is vital. That national capability is all about how we use, adapt and govern AI at scale in our domestic context. This involves coordination and alignment across intelligence, defence, national security, law enforcement, critical infrastructure and public services, all the while ensuring that alignment covers ethics, operations and resilience.

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<https://www.socialcyber.co/social-cyber-institute/ai-consequences-for-australia>

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