Climate Council of Australia

Submission to:	NSW Inquiry into data centres
Addressed to:	NSW Legislative Council - Public Accountability and Works Committee
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About the Climate Council

The Climate Council is Australia's own independent, evidence-based organisation on climate science, impacts and solutions.

We connect decision-makers, the public and the media to catalyse action at scale, elevate climate stories in the news and shape the conversation on climate consequences and action, at home and abroad.

We advocate for climate policies and solutions that can rapidly drive down emissions, based on the most up-to-date climate science and information.

We do this in partnership with our incredible community: thousands of generous, passionate supporters and donors, who have backed us every step of the way since they crowd-funded our beginning as a non-profit organisation in 2013.

To find out more about the Climate Council's work, visit www.climatecouncil.org.au.

Introduction

The Climate Council welcomes the opportunity to make a submission to the Public Accountability and Works Committee Inquiry into data centres. Data centres are increasingly important digital infrastructure that underpin everyday services and many essential functions across the economy and government. In Australia, data storage and processing is recognised within the Commonwealth critical infrastructure framework, alongside sectors such as communications, financial services and health. At the same time, the expansion of data centres in New South Wales is occurring at a scale and pace that will materially shape the state's energy system over the coming decades. The choices made now will determine whether this growth delivers net public benefit or creates avoidable system risks and delays.

As an independent, evidence-led climate organisation, our submission focuses primarily on issues within the Inquiry's Terms of Reference relating to: electricity demand, grid impacts, implications for NSW's legislated renewable energy and climate targets, water usage and lessons from other jurisdictions. We support stronger whole-of-government approaches to planning, transparency and cumulative impact management across other ToR items, including land use, housing and workforce matters. We also acknowledge the broader social and ethical concerns around artificial intelligence (AI), which is driving a significant share of new data centre demand. While important, these issues are distinct from the impacts of physical infrastructure and fall outside the scope of our submission.

Climate-fuelled disasters in NSW and across Australia are becoming more frequent and intense, and communities are feeling the consequences. They also come with a significant financial cost: the most recent State Budget shows expenditure on natural disasters has increased more than 1000% in the six years since the 2019-20 bushfires compared to the six years prior – an average of $1.6 billion per year (NSW Government 2025a).This underscores the importance of ensuring that major new electricity loads are integrated in ways that keep NSW on track to meet its climate targets.

On its current trajectory, NSW is not on track to meet its legislated 2030 or 2035 emissions reduction targets (NSW Government 2025b). The growing data centre industry risks further widening the state's projected emissions gap: without additional renewable generation, storage and system flexibility to match demand, electricity costs are likely to rise, fossil fuel electricity generation will persist for longer, and NSW's climate targets will come under increasing pressure. But, with strong, clear and enforceable policy settings, data centres can drive new clean energy investment and support a resilient electricity system.

Countries around the world are moving to set stronger standards for data centres in response to their rapidly growing energy and water demand. Many industry members and their customers are already taking steps to procure renewable energy and firming capacity, alongside measures to improve energy and water efficiency – often driven by their commercial interests. NSW offers many advantages for data centre development, including access to a large and growing market, stable institutions and regulatory frameworks, and a rapidly evolving clean energy pipeline. Many data centre operators and their customers are highly profitable, well-capitalised global companies. As the industry expands, it is reasonable to expect that this growth delivers tangible public benefits – particularly in supporting affordable clean energy and system reliability – alongside private returns.

The NSW Government has a critical window of opportunity to set sensible, pragmatic policy settings for the data centre industry. By embedding best-practice requirements into planning and approval processes, the Government can support both economic development and climate progress.

SUMMARY OF CLIMATE COUNCIL RECOMMENDATIONS

Embed best-practice requirements for data centres into NSW's planning frameworks, including requiring facilities to:

1. Support demonstrably additional renewable generation and firming
2. Meet best-practice energy efficiency standards
3. Enhance grid resilience and load flexibility
4. Adopt leading water efficiency measures and prioritise recycled and circular water systems where feasible
5. Disclose and report consistent information on electricity use, water use, backup generation and emissions

These requirements should be accompanied by the necessary work from governments, regulators and utilities to enable them.

Impacts of data centres in NSW

NSW'S DATA CENTRE PIPELINE

NSW has become a global hub for data centre development, with recent growth driven largely by a surge in cloud computing, artificial intelligence (AI) and digital infrastructure demand. The NSW Government is actively supporting a large and growing pipeline of new capacity. Setting appropriate safeguards now is essential to ensure this growth does not strain the electricity system, drive up emissions, or slow the transition to clean energy.

New South Wales is already home to around 100 of Australia's 270 data centres (Data Center Map 2026), largely centred around Western Sydney. NSW data centres currently consume at least 3.3 TWh of electricity every year, around 5% of the state's total grid consumption. By 2030, the Australian Energy Market Operator (AEMO) expects this to increase almost four times, to 12.4 TWh or about 15% of NSW's total demand. Total data centre grid demand is forecast to reach 18 TWh by 2050 (AEMO 2025). This scale of growth makes forecasting accuracy and system planning requirements critical.

Last year, the NSW Government approved 11 new or expanded data centre applications through the State Significant Development (SSD) pathway, with a combined maximum capacity of at least 1 GW (Planning NSW 2026). This included what was at the time set to be the southern hemisphere's largest data centre - the 504 MW Marsden Park Data Centre – equivalent to the power consumption of 140,000 homes (CDC Data Centres 2024). The operator, CDC, has committed to purchase 100% of the facility's energy needs from renewable sources by 2030. In practice, the data centre's planning documents show the facility will source its electricity from the grid, but will offset its electricity consumption through the purchase of Large-scale Generation Certificates (LGCs; Stantec Australia for CDC Data Centres 2024). This highlights a key challenge for policy makers and industry operators attempting to meet sustainability targets, as LGCs do not necessarily ensure new renewable generation is built or that clean electricity is supplied at the time and place demand occurs.

In March 2026, the NSW Government announced it will provide fast-tracked support for the assessment of a data centre double the size: the 1 GW Mamre Road Data Centre (NSW Government 2025c). If approved, the Mamre Road facility will include six four-storey data centre buildings, 936 cooling units and 852 diesel back-up generators. It would be one of the biggest data centres in the world, using the equivalent of more than a third of the power from Eraring coal station. The NSW Government last week announced that Mamre Road is one of 15 data centre projects being endorsed through the Investment Delivery Authority (IDA) process, facilitating fast-tracked assessment (NSW Government 2026).

While data centre growth forecasts vary, and there is evidence that some include a level of "phantom demand" – where applications have been made for energy and water connections for projects that never materialise (Oxford Economics 2025) – it is clear that without robust standards, alongside a step-change in the planning and delivery efforts of the energy transition, rapid growth in the sector will put NSW's shift to renewables at risk.

WHAT THIS MEANS FOR NSW'S SHIFT TO RENEWABLES

If new data centre electricity demand is not matched by new clean energy supply, NSW will need to rely on coal for longer, and additional gas.

This risk is reflected in recent CEFC-commissioned modelling by Baringa, which found that without additional new renewables and storage to meet data centre growth, wholesale prices and emissions would materially increase – while coordinated investment and delivery of additional renewables and batteries can contain price pressure and neutralise additional emissions.

Currently, the large-scale renewable energy currently being built in NSW is primarily intended to replace retiring coal generators (NSW Government). Should data centre demand consume this new supply, NSW risks prolonged reliance on ageing coal stations, with associated increases in outage and system reliability risk, and price spikes (Baringa 2024), as well as significant implications for the state's climate targets.

It is critical that the surging data centre energy demand is met by additional renewables, outside of what would otherwise have been built to power NSW past the end of coal. This should include provision of capacity additional and complementary to that planned to be delivered under the NSW Electricity Infrastructure Roadmap. The NSW Government should also closely consider interactions with, and additionality, to the Long-Term Energy Service Agreements scheme and the Australian Government's Capacity Investment Scheme.

Alongside measures to ensure demonstrably additional renewables are delivered, governments must explicitly safeguard against increased coal and/or gas generation to support data centre growth from occurring now and into the future, given the direct role of fossil fuels in escalating climate harm. There are clear, concerning indications that the gas industry is positioning data centre demand as a justification to lock in long-term, expanded gas use (for example, see O'Neill 2025; MacDonald-Smith 2026). Some data centres operators and executives have also publicly advocated for continued coal and gas, alongside more sustainable firming technologies, to power the growing pipeline of data centres (Cranston and Packham 2025), and are actively pursuing additional fossil fuel generation. For example, the proposed Southern Highland Data Campus would see the installation of a new 673 MW gas-fired power station that would add an estimated

two million tonnes, or more, of climate pollution in NSW every year. If this project were to proceed, it would initially increase NSW's electricity emissions by about 6%, growing to about 25% by 2035 as the grid decarbonises.

NSW'S EMISSIONS REDUCTION TARGETS

The rapid expansion of data centres poses a significant challenge to NSW's ability to meet its legislated emissions reduction targets.

Current projections indicate the state is not on track to meet either its 2030 or 2035 emissions reduction targets of a 50% and 70% reduction on 2005 levels, respectively. The electricity sector makes up a significant proportion of the emissions reductions that are expected to be achieved – with its emissions set to more than halve between 2022 (43.3 Mt) and 2030 (19.9 Mt), and half that again by 2035 (8.4 Mt; NSW Government 2025b).

The growing data centre industry risks further widening the state's projected emissions reduction shortfalls by extending reliance on coal and/or requiring additional gas generation. Analysis by Baringa shows that if data centres are built without additional renewable capacity, emissions would increase by 14% across the NEM by 2035, compared to the baseline scenario (Baringa and CEFC 2025).

IMPACTS ON ELECTRICITY PRICES

Data centre growth could drive substantial increases in electricity prices across NSW and beyond if not managed effectively.

Analysis by Baringa and the CEFC estimates that if data centre growth is not matched with new renewable generation and storage, this could increase wholesale prices by 26% in NSW, primarily due to the associated increase in gas generation. With wholesale prices making up around 40% of a typical residential power bill, this could significantly impact NSW homes and businesses. The potential impacts are not confined to NSW: South Australia and Tasmania would also be impacted despite limited added data centre load in these states, as their generation would be exported to other states to meet demand (Baringa and CEFC 2025).

Matching new data centre load with additional renewable generation, however, would significantly reduce price impacts in 2035, limiting price increases to 7% for NSW. Adding storage to reduce reliance on peaking gas in the evenings could further limit this price rise to 3% in NSW, without a material impact on emissions (Baringa and CEFC 2025).

THE UNITED STATES: A CAUTIONARY TALE ON POWER PRICES

While the United States is home to more than 5,000 data centres compared to Australia's 270, and operates under different regulatory settings, its experience highlights the potential impact of rapid data centre growth on electricity prices if not well managed. Across the country, Bloomberg analysis found wholesale electricity costs alone have increased by as much as 267% in five years in areas with significant data centre activity (Bloomberg 2025).

In addition to rising wholesale prices, in some parts of the US, households and businesses are expected to bear a share of the costs of new transmission infrastructure required to connect data centres to the grid (IEEFA 2026). This differs from the Australian context, where the costs of new network infrastructure needed solely to connect data centres to the grid are recovered from the data centre, limiting direct cost impacts on other consumers. However, the US experience still illustrates the broader risk that large, uncoordinated increases in demand can place upward pressure on wholesale electricity prices – an outcome that is clearly undesirable for consumers, governments and industry.

Many US states are now introducing laws to require data centres to support new generation capacity and contribute to network upgrades, in an effort to protect households and businesses from rising costs (US National Caucus of Environmental Legislators 2025).

IMPACTS ON THE GRID

Data centres place constant, high demand on the grid. This brings significant risks, but also has the potential to provide benefits if managed proactively. It is in the industry's own interests to support a reliable grid.

Data centres can support grid security at times of minimum system load by raising base grid demand. They can also absorb renewable energy that would otherwise be curtailed, particularly during the middle of the day when solar output is high. Analysis shows that in NSW alone, up to 1.4 TWh of renewable generation (enough energy to power approximately 3.6 million homes for an entire month) that would otherwise be curtailed by 2030, could instead be utilised by new load such as data centres (Baringa and CEFC 2025).

However, the additional load could negatively impact reliability, particularly if not matched by new generation and storage. And, during peak demand periods, data centres could increase the shortfall between renewable generation and demand. As more data centres connect to NSW's grid, this risks increasing reliance on coal and gas to meet demand, placing upward pressure on power prices on everyone connected to the grid.

During grid emergencies, large energy users like data centres can either place further strain on the grid, or support it. Other large energy users, such as aluminium smelters, support the grid by making arrangements to increase, reduce or stop power use for short-term periods when grid events occur (Australian Aluminium Council 2025).

Technical standards at connection also matter. In March 2026, the Australian Energy Market Commission released a draft rule proposing new standards for large data centres and similar facilities connecting to the NEM, noting the risk that inverter-based facilities could disconnect during disturbances and contribute to system instability. NSW should engage constructively with this process and ensure its planning and approvals settings support compliance with evolving system security requirements.

Data centres often require additional network connection infrastructure. The National Electricity Rules already allocate connection and augmentation costs to data centres if the assets are used exclusively by the data centre. We note the industry peak body states that data centres will contribute $10.3 billion to energy infrastructure from 2020- 2030 (Data Centres Australia 2026). However, where augmentations are required in the shared network, the cost recovery is more complex. We support the NSW Government's statement that cost recovery regimes should be reviewed at the respective national and state levels to ensure upgrades required for data centre connections are paid for by data centres (NSW Government 2026).

WATER DEMAND IN A CHANGING CLIMATE

Data centres' use of water resources must be managed carefully at a time when supply is increasingly uncertain.

Over the last 20 years, Greater Sydney has been in drought almost 50% of the time (Sydney Water and Water NSW 2025). Climate change will not only impact rainfall patterns and water supply, but increasing temperatures will also lead to an increase in water demand. We welcome the NSW Government's confirmation that it will consult on drought management and data centre growth (NSW Government 2026).

Data centres in Australia are currently reliant on potable water from the existing water network. Sydney Water estimates data centres use around 3.5 billion litres of Sydney's drinking water supply each year, less than 1% of total demand (Shine and Smith 2025). Like energy demand, estimates of future water use vary widely: the industry projects Sydney's data centre demand at 10.5 billion litres a year by 2030 (around 1.9% of supply). Sydney Water's estimate, based on servicing enquiries, is that the data centre industry will use up to 15 - 20% of the city's water supply in 2035. Sydney Water is receiving applications and enquiries for single data centres of up to 40 million litres per day (average day demand, equivalent to over 14 billion litres per year). This is equivalent to 70,000 to 80,000 homes, or 16 Olympic swimming pools per day (WSAA 2025).

Seizing the opportunity to do data centres right

PATHWAYS FOR RENEWABLE DATA CENTRES

We recognise that many data centre operators and customers have climate and renewable energy commitments, and are already adopting measures to purchase clean energy and improve energy efficiency. Currently, options in Australia include:

- Large-scale generation certificates (LGCs), which allow businesses to effectively offset their electricity use with renewable generation on an annual basis, but do not necessarily ensure new 'additional' generation is built or that clean electricity is supplied at the time and place demand occurs.
- Renewable Electricity Guarantee of Origin (REGO) certificates, which have recently been introduced to provide greater flexibility and transparency, including timestamping. REGOs will work alongside the LGC scheme until it is phased out in 2030.
- Power Purchase Agreements (PPAs) which enable data centres to secure renewable electricity at a set price, while providing financial certainty for renewable projects.
- Co-locating data centres with new renewable generation (usually solar) and battery storage where possible.

Over the past five years, data centre developers and other tech companies in Australia, have signed over 5 TWh of PPAs in Australia (Baringa and CEFC 2025). However, overall there remains a significant gap in the new data centre demand in Australia, and the generation supported by the industry. AEMO expects Australian data centre power consumption in 2030 will amount to more than double the current capacity supported through PPAs – nearly 12 TWh (AEMO 2025).

While the industry's efforts to procure renewable energy are welcome, it is important to note that not all PPAs support genuinely additional renewable projects — that is, projects that had not yet reached financial close or been supported through a government scheme. Broadly, in recent years there has been a decline in corporate PPAs underwriting new projects, with most PPAs attached to existing renewable energy generation assets or underwritten by state-owned utilities (RACEfor2030 2024). While there is evidence that some PPA buyers more broadly are seeking to ensure additionality by signing PPAs before financial close, there is little transparency on how widespread this practice is (Business Renewables Centre Australia 2025). In addition, companies usually purchase enough renewable energy or renewable energy certificates over a year

to cover their electricity use, but this is not necessarily matched with consumption over specific periods or within specific geographies (Baringa and CEFC 2025).

That being said, there are examples where data centres have played a material role in enabling new renewable generation. For example, data centre operator Equinix has signed a PPA for 20% of the energy from the first stage of Tag Energy's Golden Plains Wind Farm in Victoria, as part of its strategy to power its 17 Australian facilities with 100% clean energy by 2030. Tag Energy stated the PPA was "material to the project" (Lenaghan 2024).

Additionality tests must become a gateway rather than a voluntary requirement. Clear, consistent and transparent frameworks will create certainty for industry, investment and policy makers. Government should work with both data centre and renewable energy industry stakeholders to consider and establish credible options, such as PPAs linked to new build or financial close timing, or co-location, and exclusion of renewable projects already supported under government schemes.

EUROPE'S RENEWABLE DATA CENTRE LEADERSHIP

The European Union (EU) has introduced a framework to promote sustainable and transparent data centre operations, including a energy and water efficiency rating scheme for data centres in Europe, and a public reporting database (European Union 2025).

Many EU member countries are well advanced in implementing strong national standards to align data centre growth with their energy and climate goals. For example, Germany has legislated for a transition to 100% renewable data centres. Since 2024, at least 50% of the electricity consumed by each data center must come from renewable sources. This will rise to 100% from January 1, 2027, and is accompanied by legislative requirements to meet energy efficiency targets, effectively use waste heat, together with reporting and transparency requirements (Weiß 2025).

In Ireland, data centres are required to meet at least 80% of their annual demand with additional renewable electricity (for example, through PPAs with wind and solar projects) within six years of commencing operations. Importantly, renewable generation which has been supported through government mechanisms cannot be used to meet this requirement. The 80% requirement reflects Ireland's current renewable electricity target and may be reviewed if the target is revised. The six-year 'glide path' is intended to account for the timelines of renewable project development in Ireland (Ireland Commission for Regulation of Utilities 2025). Concerningly, this provision effectively allows data centres to operate entirely on fossil fuels during their first six years of operation if they choose – which would make them significantly more emissions- intensive than using electricity from Ireland's 40% renewable grid.

REDUCING ENERGY DEMAND

Many data centres are already taking steps to improve their energy efficiency, reducing their overall energy demand. These data centres demonstrate what is possible for the industry: for example, in 2019 NextDC's S1 Sydney Data centre became the first data centre in NSW, and the second in Australia, to achieve a NABERS 5-star rating for energy efficiency (NextDC 2019).

There is precedent in Australia for energy efficiency standards: since 1 July 2025, data centres contracted for use by the Australian Government have been required to achieve and maintain 5 stars NABERS Energy for Data Centres, or equivalent environmental rating such as a Power Usage Effectiveness (PUE) of 1.4 or less (Australian Government Department of Finance 2025).

Policy settings that embed clear standards for best-practice energy efficiency across all NSW data centres will provide greater certainty for both industry and government.

DATA CENTRES THAT ENHANCE GRID STABILITY, RATHER THAN STRAIN IT

Matching data centre demand with new storage, as well as renewable generation, can help reduce risks to the grid. Big batteries would draw excess renewable generation during the middle of the day, and discharge during the peak, better matching their continuous load with available renewable energy. Co-locating or contracting with big batteries would also support data centres to offer demand response services during grid emergencies without impacting their operations. We acknowledge the need for most data centres in Australia to maintain continuous operational reliability due to the nature of their workloads, and encourage government and industry to explore options for co-locating with batteries, and using alternative fuels such as renewable diesel in backup generators.

Biodiesel is being trialled around the world as a sustainable backup power option for data centres, for example at the Vantage Data Centre in Wales. In Australia, AirTrunk intends to trial renewable diesel at the Mamre Road Data Centre. Some data centre operators in Australia are also investing in storage. For example, the Supernode Data Centre and BESS in Queensland will host one of the largest battery storage installations in the National Electricity Market (NEM). The 750 MW, 2-4 hour battery will provide stable power supply and help overcome critical stability issues facing the Queensland power grid (Quinbrook 2025).

For some data centre customers, there are also opportunities to shift their load by performing non-critical tasks to times of high renewable output. For example, Google is embedding a range of flexible demand capabilities into its data center fleet, which

enables it to shift or reduce power demand during certain hours or times of the year (Google 2025).

IRELAND'S DATA CENTRE DEMAND FLEXIBILITY REQUIREMENTS

In Ireland, data centres connecting to the electricity network will be required to provide dispatchable generation and/or storage capacity onsite, or nearby, which matches their maximum capacity. This generation is required to participate in Ireland's wholesale electricity market. Due to these requirements, data centres will not be directed to shut down or reduce their power use during grid emergencies (Ireland Commission for Regulation of Utilities 2025).

UNLOCKING REGIONAL DATA CENTRE DEVELOPMENT

Siting data centres outside cities and near renewable energy zones (REZs) wherever possible could help reduce network augmentation costs, ease transmission constraints and support regional development. Grid congestion and network restrictions in urban locations is increasingly leading data centre developers to start considering opportunities for development in regional or remote locations (Baringa and CEFC 2025).

Strategic action to locate data centres around REZs, including cost sharing arrangements, could help accelerate their delivery and even unlock additional renewable capacity (Baringa and CEFC 2025). The NSW Government should explore options to encourage data centre development outside of urban centres where workloads are not latency-sensitive.

REDUCING IMPACTS ON WATER RESOURCES

There are a range of opportunities to improve water efficiency and reduce use of potable water, including through water recycling. We note key industry players are already taking steps to improve its water efficiency, for example, AirTrunk has invested in the research and development of liquid cooling technologies since 2019 (AirTrunk 2025), and CDC has developed an advanced liquid cooling system that does not rely on ongoing water consumption, and reduces evaporation and waste. CDC estimates 5,000 million litres is being saved across 13 CDC-operated data centres in New Zealand and Australia through this technology (CDC Data Centres). Overseas, Google's Hamina data centre in Finland uses an innovative cooling system that draws cold seawater from the Gulf of Finland to remove heat from servers via heat exchangers, rather than relying on potable water or energy-intensive chillers (Google 2025).

New infrastructure to enable use of recycled water may require significant capital expenditure that in some cases may benefit solely, or largely, the new data centres. NSW should clarify water infrastructure cost allocation, ensuring data centre growth does not

shift avoidable water network costs onto households, and that infrastructure investment reflects the scale and commercial benefits of new development.

THE RIGHT INFORMATION TO INFORM DECISION-MAKING

As noted throughout our submission, the estimates of future data centre water and energy demand vary widely. Reliable and transparent data on the magnitude of future demand is a critical foundation for effectively planning for and reducing impacts. We welcome the NSW Government's commitment to collaborate with industry to improve approaches for forecasting both water and energy demand, including by aligning assumptions, as part of its recently released *Data centre consultation paper*. Governments should also ensure there is an accurate, shared understanding of the renewable energy generation and storage capacity that is planned or underway. This is essential to enable ongoing monitoring of the system-wide impacts of data centre development.

ENABLING INNOVATION

Alongside setting strong standards for data centres, governments, regulators, and industry must work to ensure that the new infrastructure required to support sustainable data centres – and decarbonisation of the rest of the economy – can be delivered at the pace and scale that reflects the urgency of the climate crisis.

The data centre industry has expressed its support for the Australian Government's expectation that data centres support Australia's energy transition, including grid stability (Data Centres Australia 2026). However, the industry notes that there are currently a range of regulatory barriers to innovative sustainable solutions. For example, current environmental regulations around the use of backup diesel generators and battery storage are a barrier. Similarly, the data centre industry notes that accelerated approvals for water infrastructure are needed to deliver the quality and quantity of recycled required (Mandala and Data Centres Australia 2025).

Industry, government, regulators and system operators must work together to ensure data centres are both able and required to be powered by additional renewables, support system security, and adopt recycled water systems.

The challenge is for industry, government, regulators and system operators to collaborate and take urgent action to ensure data centres support Australia's shift to renewables, rather than derail it.

The NSW Government's choices now will determine the impacts for decades to come

The NSW Government has a once-in-a-generation opportunity to develop data centres in ways that support our shift to renewables without negatively impacting power bills, energy security or our environment.

Industry, governments, regulators and system operators all have a role to play. The Australian Government's new *Expectations of data centres and AI infrastructure developers* set baseline expectations for new data centres. Local governments are proactively expressing their willingness to collaborate to seize Australia's data centre opportunity through smart infrastructure and domestic capability, spreading the benefits through adoption and workforce development, and keeping Australians safe through strong safeguards and responsible practice and international engagement (Council of Capital City Lord Mayors 2026).

We welcome the recent release of the *Data centre consultation paper* to guide data centre development in the state. The NSW Treasurer has indicated that due to the high demand for data centres in NSW, the Government feels "capable of applying really high standards here when it comes to power use, water use and other associated impacts" (Karp 2026). Now, the Government must turn these statements into action and enforce the strongest possible standards for data centres in the state.

SINGAPORE'S SUSTAINABLE DATA CENTRE REQUIREMENTS

In Singapore, new data centres must compete for grid connection rights through a call for applications process. Projects are assessed against criteria including energy efficiency, low emissions energy, and sustainability best practices, including a requirement to be certified under Singapore's Green Mark scheme (Singapore Government 2025).

RECOMMENDATIONS TO EMBED BEST-PRACTICE REQUIREMENTS FOR DATA CENTRES INTO NSW'S PLANNING FRAMEWORKS

Embedding robust sustainability criteria for data centres into NSW's planning framework would deliver stronger environmental, social and economic outcomes, while also providing greater clarity and certainty for investors. With many operators and their customers already taking steps to source renewable energy and increase water and energy efficiency, the sector is well-placed to meet strong regulatory requirements.

Given the scale of projects already progressing through the approvals pipeline – and their potential impacts on the electricity system and the state's climate targets – these requirements should be applied to projects currently under assessment[1].

REQUIRE DATA CENTRES TO:

1. SUPPORT DEMONSTRABLY ADDITIONAL RENEWABLE GENERATION AND FIRMING

Building on existing industry-led action, data centres in NSW must be required to support the development of new renewable generation and firming capacity — beyond what would have been built without the industry's demand and support – reflecting both the scale of their electricity demand and their capacity to contribute to system-wide outcomes.

There must be clear measures in place to ensure data centres that can demonstrate additionality, or are co-located with new renewable generation and storage are established as industry norms rather than opt-in arrangements. To enable this, improved planning processes and grid access rules should be considered and implemented in tandem.

Like other jurisdictions around the world, a phased transition to fully renewable data centers that aligns with NSW's legislated climate targets should be outlined and implemented as soon as possible. However, safeguards must be in place to ensure that at a minimum, any new data centre's energy use is no more emissions-intensive than NSW's ~40% renewable grid from day one of operations – anything less than this requirement would be a material step backwards for the state's clean energy transition.

2. MEET BEST-PRACTICE ENERGY EFFICIENCY STANDARDS

Building on the Australian Government's requirements for contracted data centres, data centres in NSW should be required to maintain 5 stars NABERS Energy for Data Centres, or equivalent environmental rating such as a Power Usage Effectiveness (PUE) of 1.4 or less.These requirements should be applied to all new data centres in NSW, while considering increasing the required NABERS rating to the maximum of six stars over time.

Policy settings that embed clear standards for best-practice energy efficiency across all NSW data centres will provide greater certainty for both industry and government.

[1] Noting the industry estimates a significant proportion of Australia's organisational computing capacity is in on-premises servers (Data Centres Australia 2026), consideration should be given as to how these requirements should apply to on-premises facilities, as well as commercial data centres.

3. ENHANCE GRID RESILIENCE AND LOAD FLEXIBILITY

Like other large energy users, data centres should support the grid by offering demand response mechanisms when grid emergencies occur. This should be supported by co-location with battery storage or use of low emissions fuels, rather than diesel generation, wherever possible. Data centres should be encouraged to shift non time-sensitive workloads to the middle of the day to use excess solar power, while performing only essential tasks – or drawing on battery storage – during peak demand times.

4. ADOPT LEADING WATER EFFICIENCY MEASURES AND PRIORITISE RECYCLED AND CIRCULAR WATER SYSTEMS WHERE FEASIBLE

Responsible water management must underpin future development. Alongside appropriate planning, data centres must be required to minimise potable water use through design and technology, for example closed loop systems, recycled water use, air-cooled or hybrid cooling systems, or use of non-potable water such as seawater.

5. DISCLOSE AND REPORT CONSISTENT INFORMATION ON ELECTRICITY USE, WATER USE, BACKUP GENERATION AND EMISSIONS

Reliable and transparent data on the magnitude of future water and energy demand is a critical foundation for effectively planning for and reducing impacts. The significant variation between industry and utility/regulator estimates shows there is a need for governments at all levels, and industry, to work together to develop a nationally consistent framework that balances commercial sensitivity and security considerations with best practice reporting standards. This should be underpinned by a requirement for data centre operators to disclose and report consistent information on electricity use, water use, backup generation and emissions, to support improved system planning and accountability.

ENABLING INNOVATION

It is important that requirements for data centres are accompanied by strategic planning and action by both state and federal governments, regulators and utilities to enable effective implementation. This work should be undertaken in parallel with the implementation of the initial commitments in the NSW Data Centre Consultation Paper, for example working with industry to improve demand forecasting accuracy.

Conclusion

The evidence is clear: if new data centre demand is not matched with additional renewable generation, storage and system flexibility, it will place upward pressure on electricity costs, extend the operation of fossil fuel generation, and increase risks to NSW's emissions reduction trajectory. Similarly, without careful planning, data centre water use could place growing pressure on NSW's water resources.

These outcomes are not inevitable. With clear, well-designed policy settings and planning, data centres can support new clean energy investment and deployment, improve grid efficiency and contribute to a clean, more resilient energy system.

The NSW Government now has an important opportunity to ensure that data centre development aligns with community expectations, delivers clear public benefits, and supports the state's energy and climate objectives.