

Powering Al

Scoping Western Australia's data centre opportunity



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Introduction

More than ever, corporate and government services are delivered by data applications that facilitate remote data access, real-time data sharing, and the ability to collaborate or work from almost anywhere in the world. This new paradigm of working, combined with increased demand for digital media and advanced digital technologies, such as Artificial Intelligence (AI), saw the levels of data transferred online increase 100-fold between 2016 and 2023.¹

As a result, the demand for new data centres continues to increase, with data centres critical to enabling the transfer of information. Current trends indicate that existing global investment in data centre capacity will double by 2032, and Australia's own capacity will double by the end of this decade. ^{2,3} However, this new data centre boom comes at a time when many countries are grappling with the realities of the energy transition and competing priorities, creating challenges for key data centre markets, including Sydney and Singapore. ^{4,5}

Against this backdrop, new opportunities exist for those able to ensure the reliable and affordable supply of energy required to attract investment, cater to global demand and power the digital economy. In its 2022 prospectus, the Western Australian Government recognised the potential economic benefits of the sector for Western Australia, but there are some barriers that need to be addressed.⁶

By comparison, other jurisdictions have strong policy positions to not only incentivise large projects through tax reform, but are also focused on reducing the cost of energy. In this context, Western Australia needs to be more competitive to seize the data centre opportunity.

In this policy paper, we highlight current trends, canvas potential opportunities, and pose a set of recommendations to activate the data centre opportunity for WA.

Data centres: who's plugged in?

More than 6,000 public data centres exist globally across more than 150 countries forming a complicated web of data hotspots that underpin modern economies.^{7,8} These data centres, however, are not spread uniformly across different geographical locations.

Instead, data centres are most prevalent in locations where the density and transfers of data are the highest.⁹ This modern phenomenon sees digital applications and services being hosted where the generation, processing, storage, and use of data is the highest.¹⁰ Typically, the wealthier and more populous a country, the greater their data

 $^{^{\}rm 10}$ McCrory, D. <u>Data gravity – in the clouds</u>. December 2010.



¹ Jr, T. B. Cisco Blogs. <u>The zettabyte era officially begins (How much is that?)</u>. September 2016.

² World Economic Forum. <u>This is the state of play in the global data centre gold rush</u>. April 2025.

³ CBRE. <u>Australia Data Centres 2024</u>. October 2024.

⁴ Property Council of Australia. <u>Sydney slips out of global top 10 data centre markets</u>. May 2025.

⁵ Data Center Dynamics. <u>The looming energy crisis: An existential threat to data centers worldwide</u>, October 2023.

⁶ WA Government. Western Australia: The southern hemisphere's global hub for data centre operations. December 2022.

 $^{^{7}}$ ABI Research. <u>How many data centres are there and where are they being built?</u>. July 2024.

⁸ Data Center Map. <u>Data Centers</u>. Accessed February 2025.

⁹ Crowdstrike. <u>Understanding Data Gravity</u>. March 2024.

footprint. As a result, data centre investment is most prevalent in countries with high levels of wealth and a highly developed (or rapidly developing) digital economy.

For example, the United States (U.S.) is home to more than 5,400 data centres, far exceeding that of other major data centre markets, namely Germany (522), the United Kingdom (517), and China (448). Australia has approximately 306 data centres in total, the second most of any country in the Asia-Pacific region. Nearby Singapore, despite having fewer data centres (74) by comparison, is nonetheless considered a regional hot spot given its strategic location, data density, and existing infrastructure.

By comparison, WA is home to approximately 25 of Australia's data centres, which is considerably less than other Australian states and its neighbours in the Asia Pacific region.¹⁴

Being a wealthy state within a wealthy nation and located between two existing data centre markets, WA is ideally positioned to capitalise on the opportunities and trends rapidly emerging in this space.

Data intelligence: the new reality

Product and service enhancements facilitated by AI and other advanced technologies are anticipated to account for approximately 45% of global economic gains by 2030, totalling some US\$15.7 trillion.¹⁵ While the tech sector is a major contributor of this growth, it is not the only driver. Instead, all sectors of the economy will benefit as businesses seek to capitalise on the productivity gains made possible through data applications, for example, in:

- the finance and banking sector: All is being used for investment research, unique banking services, and automated knowledge management, driving productivity and efficiency gains. 16
- the health sector: All is gaining increased attention for its potential in diagnosing medical conditions, monitoring patient health and developing treatment plans.¹⁷
- the manufacturing sector: All is being deployed to help analyse the swathes of data generated by real-time sensors and machines to facilitate machine learning, which assists in reducing delays and defects by automatically refining processes.¹⁸
- the agriculture sector: All is being used to collect and analyse large amounts of complex data via machine learning, robotics, drone technology and sensor networks. In addition, robots guided by Al-based computer vision and machine

¹⁸ Forbes. <u>Artificial Intelligence in Manufacturing</u>, July 2023.



 $^{^{\}rm 11}$ Data Centre Magazine. $\underline{\text{Top 10: Countries with the Most Data Centres}}, February 2024.$

¹² Data Center Map. <u>Australia Data Centers</u>, Accessed February 2025.

¹³ The Straits Times. <u>South-east Asia emerges as global data centre hot spot as Al usage rises</u>. October 2024.

¹⁴ Ibid.

¹⁵ PwC. Seizing the prize. What's the real value of Al for your <u>business</u>, and how can you capitalise on it? February 2025.

¹⁶ EY, Chlouverakis K. <u>How artificial intelligence is reshaping the financial services industry.</u> April 2024.

¹⁷ Alowais, S.A. et al. <u>Revolutionizing healthcare: the role of artificial intelligence in clinical practice</u>, September 2023.

- learning are being deployed to drive significant productivity gains compared to existing manual processes.¹⁹
- the resources sector: All is helping to analyse the vast amounts of site data generated by monitoring systems as well as facilitating the use of algorithms to more accurately predict where mineral deposits may be located.²⁰ It is also being used in maintenance, where it can pre-empt scenarios that may cause processes to go offline, as well as facilitating the automation of machines and transport.^{21,22} To capitalise on the safety, productivity and efficiency gains of Al, the resources sector is also increasingly focused on "Al edge computing", where it processes the data faster and more efficiently.^{23,24}

As data applications continue to rapidly evolve across sectors, different types of data centres will be required to enable the use of these advanced technologies.²⁵

While these data services are currently being enabled through a combination of local data centres and those based on the East coast and offshore, an investment in local data centres has a number of distinct advantages.

For example, local data centres provide low-latency access to data generated in WA, enabling near-real-time AI and analytics solutions that are impractical when data must be sent interstate or offshore due to network delay and bandwidth constraints. They can also reduce the costs of developing advanced technologies by avoiding fees associated with moving and processing large volumes of data over long-haul networks. Finally, they support data security by keeping sensitive and restricted data onshore.

As a result, if WA doesn't invest significantly in the enabling infrastructure required to underpin these constantly evolving technologies, Western Australia risks jeopardising not only its global competitiveness, but we miss out on the significant economic opportunities associated with data centre investment as well.

Data centre investment reaches new heights

In recent years, we have seen a plethora of countries positioning themselves as market leaders in data centres in response to these market trends. Malaysia, for example, aims to achieve a digital economy that contributes 25.5% toward its total GDP by 2025. Much of this digital growth is expected to be driven by investment in data centres, which is intended to capitalise on the demand for data from within the Asia-Pacific region. In the U.S., President Donald Trump has also announced a US\$500 billion initiative to fast track Al development and construct new data centres over the next four years. All development and construct new data centres over the next four years.

²⁸ Chatham House. <u>Trump, Stargate, Deepseek: A new, more unpredictable era for Al</u>. February 2025.



¹⁹ Kesari, G. <u>The future of farming: Al innovations that are transforming agriculture</u>. Forbes. March 2024

²⁰ BHP. <u>Artificial Intelligence is unearthing a smarter future</u>. August 2024.

²¹ University of Queensland. Mapping the mine face with artificial intelligence. March 2021.

²² CCIWA member.

²³ Edge computing is the processing of data in proximity to the location where the data is created.

²⁴ Szleter, P. The rise of edge computing in an increasingly connected world: Five practical applications. January 2024

 $^{^{\}rm 25}$ IBM. What is an Al data center? September 2025.

²⁶ Malaysian Investment Development Authority. <u>Data centres crucial to draw investments</u>. August 2024.

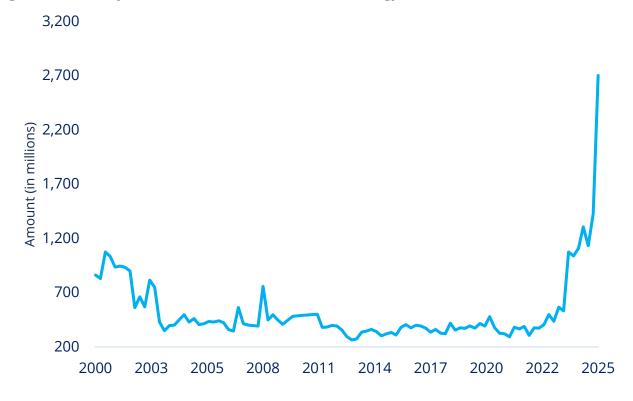
²⁷ Infrastructure Investor. <u>Malaysia transforms into a data centre powerhouse</u>. February 2025.

Since 2022, China has invested US\$6.12 billion into a national project that has seen more than 1.95 million server racks installed to ensure growth within their own industry.²⁹ This ultimately culminated in the launch of DeepSeek, an Al alternative to the current U.S. dominated offerings (Chat GPT/CoPilot/Claude), which attracted US\$1.3 trillion to China's equity markets in a single month.³⁰

Closer to home, in Australia, total national occupancy has expanded from just 37-megawatt capacity (MW) in 2005 to 1,315 MW in 2025 – a fortyfold increase.³¹ Notably, two-thirds of this growth has occurred within the past five years, driven by the rapid digitisation of the economy, the surge in remote work during the pandemic, and the exponential rise in Al-related computing demand.

We are seeing global players, like Equinix and STACK, expand rapidly in Australia, particularly in Sydney and Melbourne, which house about 80% of the country's data centre capacity.³² In the September quarter 2025, there has also been a doubling of investment in the components used to build data centres – routers, cooling towers and servers - from \$1.4 billion to \$2.8 billion [Figure 1] with trends expected to continue.³³ CBRE forecasts Australia's data centre investment will continue to grow by 50 per cent in the next four years, reaching \$46 billion in 2029, based on committed projects.³⁴

Figure 1: Quarterly investment in infrastructure technology, ABS data.



³⁴ CBRE. <u>Australia's Data Centres 2024</u>. October 2024.



²⁹ Reuters. China invests \$6.1 billion in computing data center project, official says. August 2024.

³⁰ Financial Review. <u>Investors pile into China as DeepSeek unleashes Al bulls</u>. February 2025.

³¹ M3 Property. <u>Data Centre Growth in Australia</u>. November 2025.

³² DLA Piper. Riding the Al wave: Australia's booming data centre investment opportunity. March 2025.

³³ Australian Financial Review, Kinsella L. <u>Data centre investment doubles to \$2.8b in just months</u>. December 2025.

Data centres: critical infrastructure for the WA economy

Like these other jurisdictions, Western Australia too could benefit from an increase in data centre investment. The benefits would be at least two-fold:

Driving diversification pathways

Successive State Governments have sought to diversify Western Australia's economy beyond the resources sector. Acceleration of defence, life sciences and space sectors, for example, are poised for success, with data centres, including edge computing capabilities, critical to these efforts. These diversification opportunities are explored further below.

Defence and data sovereignty

Data centres have become increasingly linked to defence policy as use of technology in conflict has grown in prevalence. All is being touted as the "most powerful weapon of our time", offering enhanced defensive capabilities and helping to eliminate error. For example, in a contested Indo-Pacific, Al-imbued technology can be deployed at sea to improve maritime awareness of territorial waters, record data and provide a map of grey-zone tactics. For example, in a contested Indo-Pacific provided in the contest of the contest of

Unsurprisingly, Australia has sought partnerships with its AUKUS allies in automation and developing AI algorithms to support target detection and decision-making.³⁷ Further abroad, the evidence of the importance of AI is apparent in the renewed rivalry between China and the U.S. following the release of DeepSeek, a Chinese generative AI system, which highlights the intersection between AI, data sovereignty and national security.

During our engagement, CCIWA members also spoke of the value of storing the data of our government departments, local businesses and organisations within WA. Doing so prevents data falling into the hands of any foreign actors who might seek to work against WA's interests. At present, much of the data in question is hosted by data centres in the Eastern states, which are backed up in the U.S. or other locations by major providers such as Amazon or Microsoft.^{38,39}

In such circumstances, data can be accessed by foreign agencies, presenting a risk to WA's intellectual property and sovereign data. ⁴⁰ Though provisions also exist for U.S. companies operating here in Australia, encouraging cloud storage providers to operate in Australia could facilitate greater control of data. With more of WA's data stored locally, this provides increased security for WA businesses and acts as an alternate backup location that can also be offered to other Australian states and territories.

⁴⁰ Communications Law Bulleting 33.2, Wong, Ken. *Exercising Jurisdiction Over Foreign Corporations: The USA PATRIOT Act and the Extent to Which US Government Law Enforcement Agencies Can Obtain Information from Abroad.* June 2014.



³⁵ Carnegie Europe. <u>Governing Military Al Amid a Geopolitical Minefield</u>. July 2024.

³⁶ The Interpreter. <u>ASEAN and the military applications of AI</u>. April 2024.

³⁷ Australian Government. Enhancing Al to support the warfighter. August 2024.

 $^{^{\}rm 38}$ CCIWA stakeholder consultation.

³⁹ Media Statement, Prime Minister and Cabinet. <u>Amazon data centre investment in Australia</u>. June 2025.

Life Sciences

Another industry earmarked by Diversify WA as a priority sector is the life sciences, which includes, among others, biology, biotechnology, microbiology, pathology, and pharmacology. News headlines tell a story of AI contributing greatly to this space by speeding up the research process and assisting in the development of new medical treatments.⁴¹ This information was verified by local organisations in the life sciences sector.⁴²

Across Western Australia, customised AI models are already improving the efficiency of research in both biology and medicine. For example, models are currently being used that possess the ability to predict the structure of a specific protein, or to analyse a dataset and develop a solution for how a particular patient should be treated.⁴³ These models are also increasingly able to detect whether certain genes within a patient are problematic in relation to the effectiveness of a particular treatment.

They too can consider multiple scenarios simultaneously and deliver multiple outputs, even accounting for individual biomarkers. In short, the analysis of data that was previously completed by a team of experts can now be completed at speed by an Al model. As a case in point, one industry participant stated that there are some 100,000 research papers referencing the importance of a singular protein type linked to cancer susceptibility. No single expert can be expected to be across literature so expansive, yet with Al this is possible.

With this context, the value of these AI models to WA's life sciences sector becomes increasingly apparent. In fact, one stakeholder suggested that with AI, WA's life science sector could compete globally:

Artificial Intelligence can break the narrative that WA's life sciences sector is small by removing barriers and growing expertise here.

The rate at which these models are being adopted continues to grow, providing WA's life sciences sector with the ability to pursue emerging research trends. While some areas are yet to experience transformative change, industry will continue to rely on the AI services that local data centres facilitate. Already, researchers in the space are frequently re-evaluating their options for accessing the processing power required to perform complex scientific computations.

The need to store sensitive patient and trade data locally, combined with the impracticability of managing and updating their own data centres, requires that a decision must often be made between hosting models at one of WA's own local providers, or universities. WA's growing life sciences is an example of an industry that would benefit from increased data centre investment in WA.

⁴³ CCIWA stakeholder consultation.



⁴¹ Monash University. New Al tool for rapid and cost-effective drug discovery. June 2024.

 $^{^{42}}$ CCIWA approached several businesses and organisations who were consistent in their feedback on this topic.

Space

Western Australia is rapidly establishing itself as a global hub for space and advanced technology industries. With over 130 international space companies now operating in the State and more than \$85 million invested since 2020, WA continues to grow its presence in this industry. Raytheon Australia's training initiatives in Exmouth and the development of a facility for remote autonomous operations in extreme environments further underscores the State's growing capabilities in high-tech sectors.

CCIWA members have highlighted that the industry is now among the largest users of data centre capacity in WA. As such, the development of local data centre capacity underpins the growth of the space industry. These facilities provide the digital infrastructure needed for our local space and related defence industries to operate efficiently, while ensuring that important data remains secure within our own borders.

Beyond technical benefits, stakeholders expect that local data centres will underpin growth in the space industry, which is expected to drive job creation, attract global partnerships, and strengthen WA's position in the digital economy.

Driving local and regional economies

The construction and the operation of data centres has shown to stimulate local economic growth by attracting investment, creating jobs, expanding the pool of skilled workers, and enabling emerging industries. 44,45 Job figures from the United States shows that data centre related jobs grew in number by 20% between 2017 and 2021 – in stark contrast with the national average of just 2%. 46

A 2017 study undertaken by the U.S. Chamber of Commerce reported that an average-sized data centre generates AUD\$68.8m in local economic activity, AUD\$16.5m in wages and AUD\$2.3m in tax paid per annum. Economic benefits were also high during construction, with 1,688 local workers involved directly or indirectly being paid AUD\$164.6m in wages. Throughout the same period, local economies experienced average economic activity of AUD\$516.1m, with AUD\$21.1m in tax revenue paid to government. 47,48

Data centres have already become increasingly prominent in WA's regions, with the Pilbara towns of Newman and Port Hedland benefitting from data centre investment. Positioning data centres close to areas of industrial activity, such as the Pilbara and Mid-West, reduces latency for operations, unlocking technologies such as autonomous vehicles, asset monitoring, national defence, 5G accessibility, and more stable video conferencing.⁴⁹

⁴⁹ Verizon Business. <u>How 5G and data centers at the edge can help improve operational efficiency</u>. Accessed March 2025.



⁴⁴ McKinsey & Company. <u>Investing in the rising data center economy</u>. January 2023.

⁴⁵ Mandala. <u>Empowering Australia's digital future</u>. October 2024.

 $^{^{46}}$ CBRE. Data Center Growth Has Economic Ripple Effects. May 2024.

⁴⁷ U.S. Chamber of Commerce. <u>Building data centers creates jobs</u>. August 2017.

⁴⁸ Figures consider U.S. inflation rates between 2017 and 2025 and the 2025 average exchange rate.

Opportunities abound, but data centre investment comes at a cost

Data centres demand a large amount of power to operate, largely due to the electricity required to operate swathes of server racks and the cooling systems required to keep them at an operational temperature. The U.S. Department of Energy estimates that a typical data centre demands anywhere from 10 to 50 times the electricity required by a commercial office building with a comparable area of floor space.⁵⁰

For contemporary data centres, a yearly energy usage of approximately 200 megawatts is considered typical – more than 500% higher than what was considered normal only ten years ago. Hyperscale operations consume significantly more energy, often exceeding 850 gigawatts annually and they require large areas of land.⁵¹ The average size of data centre land holdings in Australia has surged from 1.3 hectares in 2018 to 15.7 hectares in 2024.⁵²

While the volume of demand is one driver, the intensity of tasks is also an issue. Al's energy demands are completely different to that of traditional digital services, for example, an Al prompt requires ten times more electricity than a Google Search.⁵³ Al workloads can also be highly variable, leading to surges in electricity demand that remain difficult to forecast and present significant power reliability challenges.⁵⁴

To cater for rising demand, existing data centres are being forced to upgrade their processing power resulting in power usage rates approximately four times higher than that of the previous hardware.⁵⁵ As a result, the demand for electricity from data centres is expected to exceed most major economies by 2030, with the exception of China and the United States [Figure 2]. In Australia, energy consumption from data centres is expected to double, from a total of 1,350 megawatts in 2024 to 3,100 megawatts by 2030.⁵⁶

⁵⁶ ITBrief. <u>Australia's data centre investment to exceed \$26bn by 2030</u>. October 2024.



⁵⁰ U.S. Department of Energy. <u>Data Centers and Servers</u>. Accessed January 2025.

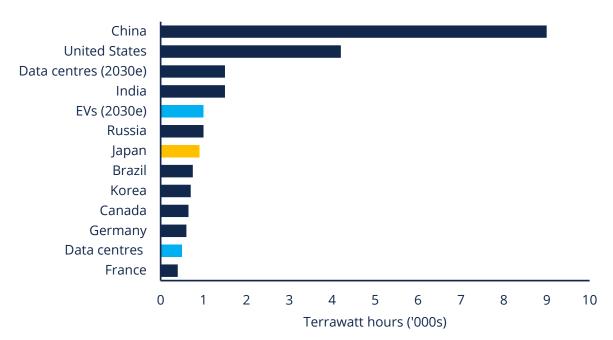
⁵¹ McKinsey & Company. Al data center growth: Meeting the demand. October 2024.

⁵² Property Council of Australia. Sydney fastest growing data centre region. October 2024

⁵³ Ibid.

⁵⁴ Chen, X et al. Electricity Demand and Grid Impacts of Al Data Centers: Challenges and Prospects. Cornell University. September 2025.





In addition to this, data centres also require a level of redundant power to maintain uninterrupted operations. Based on investments being made and proposed in the south of the United States, a 600MW data centre powered by natural gas, for example, needs approximately 33% redundant power capacity (upwards of 800MW capacity). For a renewable and battery mix, which is less reliable, an additional 50% of redundant power is required.

Alongside power, water is also used for cooling purposes, making access to suitable amounts of water a critical issue. Using traditional cooling methods to maintain servers at operational temperatures, a one-megawatt data centre can consume more than 25 million litres of water per year.⁵⁸

However, Western Australia is uniquely positioned to adopt innovative, low-resource cooling solutions to address water and energy concerns. By leveraging local technologies such as immersion cooling and exploring free-cooling opportunities afforded by our climate, WA is able to dramatically reduce water consumption and energy demand compared to traditional air-cooled data centres.

Nevertheless, the seemingly endless demands for energy, land and water are becoming 'wicked issues' for policymakers across the globe.

For example, in Ireland, data centres now account for 21% of the country's total energy consumption and more than all urban dwellings combined, leading to a moratorium preventing new builds until 2028.^{59,60} Germany, another major data centre market,

 $^{^{60}}$ Public Policy.ie. $\underline{\text{Data Centres in Ireland}}.$ October 2024.



⁵⁷ CCIWA analysis of energy data.

⁵⁸ Emerson Taqi, J and Johnson, J. 2024. <u>Data Centres and water: From scrutiny to opportunity</u>. December 2024.

⁵⁹ Current News. <u>Data centres consumed 21% of Ireland's metered electricity in 2023</u>. July 2024.

passed legislation in 2023 requiring greater energy efficiency, information obligations and the recycling of waste heat to control energy use.⁶¹

In 2019, Singapore implemented a moratorium on new data centres in response to their intense resourcing requirements. ⁶² This moratorium was lifted in 2022 to entice investors away from neighbouring countries, such as Malaysia, who are actively seeking to grow their own market share. ⁶³

However, amongst these challenges, there remains a seemingly endless demand for data. This presents a real economic opportunity for Western Australia.

The West Australian advantage

Western Australia has three major factors working in its favour to support a growing data centre sector: geography, a strong diversification agenda and reliable energy mix underpinned by gas and renewables. Further, WA is also capable of building smart, scalable, quick-to-build, and sustainably operated digital infrastructure - validating the three advantages that follow.

This is not a theoretical advantage either: Western Australian industry has already demonstrated the ability to rapidly deploy hyperscale-ready or edge facilities, powered sustainably by our state's cleaner energy mix, and innovative cooling solutions.

Geography

Despite more recent challenges, Australia's major east coast cities have traditionally attracted the bulk of investment in Australia's digital infrastructure. Concurrently, WA has remained largely underdeveloped despite its strategically important geographic location. This will need to change as the digital economies of Southeast Asia continue to expand rapidly, with Southeast Asia alone poised to boast a US\$1 trillion digital sector by 2030.⁶⁴

To facilitate this growth, data centre infrastructure servicing the region must scale accordingly. Conventionally, Singapore has played this role, fulfilling approximately 60% of the Asia-Pacific's data centre needs since 2021. However, as noted above, issues relating to land availability and sufficient energy generation have warranted moratoriums.⁶⁵

Given WA's strategic geographic location and shared time zones with regional economic hubs, Western Australia is particularly well placed to service this growing digital economy. Further, the required infrastructure is already in place for WA to capitalise on services exports to the region, with existing fibreoptic subsea data cables connecting Port Hedland to Jakarta in Indonesia and Singapore.⁶⁶

Free trade agreements with both countries exist with clauses to facilitate data sharing and information exchange. By increasing the number of data centres within Western

⁶⁶ Vocus. <u>Australia Singapore Cable</u>. Accessed April 2025.



⁶¹ White & Case. <u>Data center requirements under the new German Energy Efficiency Act</u>. October 2023.

⁶² EDB Singapore. <u>Singapore pilots sustainable way to grow data centre capacity</u>. July 2022.

⁶³ Financial Times. <u>Singapore's 'Fomo' amid the rise of the Al data centre</u>. June 2024.

⁶⁴ Australian Government. <u>Australia: APAC's rising regional hub for green data centres</u>. March 2024.

 $^{^{\}rm 65}$ ITPro, Marzouk Z. Why Singapore stopped building data centres. April 2022.

Australia, we could capitalise on these agreements and position our State as a key player in Southeast Asia's lucrative digital economy.

Local data centre operators have spoken to these points directly, with several operators confirming interest from Southeast Asian businesses to host cloud data within WA. At the same time, however, there was a shared feeling among those engaged with that the sector was lacking the comprehensive framework and support required to make deals materialise.

Proximity to end users was once a critical factor in data transfers but technological advancements, including fibreoptic cables, have reduced latency concerns for many cloud-based applications.⁶⁷ Though proximity remains a consideration for applications where lightning-fast response times are required, consultation with CCIWA members highlighted that these advancements have opened the door for WA to serve as a regional hub for nearby countries without being constrained by traditional geographic limitations.

As a large state, WA also has an advantage when considering land accessibility. This will become increasingly salient as the industry grows. Land requirements for data centres are already competing with the industrial and logistics industries in footprint. ⁶⁸ Ultimately, decisions around land use will need to be informed by access to reliable energy and sufficient water, as provision of these essential resources present other challenges as well.

Energy

The majority of data centres maintain a high-voltage connection to the local power grid, meaning that the type of energy they consume varies based on the energy mix of a location.⁶⁹ Given the energy intensity of data centre operations, large companies often endeavour to source their energy from low-emissions sources, either by investing directly in renewables or engaging in carbon trading schemes.^{70,71}

Indeed, the renewable energy sector has signalled support for data centres, as a 600MW data centre, for example, would enable the offtake requirements to get these renewable energy projects off the ground.

However, with data energy demand threatening to exceed supply, traditional fuels such as coal, are increasingly being relied upon. This has led to Google and other major data centre providers missing their pledged climate targets.⁷²

This is reflective of the problem facing both the data centre and energy markets: more energy than ever is required at the same time as grid instability is increasing worldwide. For example, data centre operators in Ireland have called for the ability to connect

⁷² Associate Press. <u>Google falling short of important climate target, cites electricity needs of Al</u>. July 2024.



⁶⁷ Ropes & Gray, Moseley H. <u>Data Centre Investment: Key Considerations for Investors in a Booming Market</u>. May 2024.

⁶⁸ CBRE. <u>Australia's Data Centres 2024</u>. October 2024.

⁶⁹ TRG Datacenters. <u>A Guide to Data Center Power Design and Infrastructure</u>. Accessed March 2025.

⁷⁰ Google. Net-zero carbon. Accessed May 2025.

⁷¹ Amazon. <u>Carbon-free energy</u>. Accessed May 2025.

directly to gas rather than the existing power grid. Closing and relocating their operations was the alternative pathway proposed.⁷³

Amidst these growing pains lies an opportunity for Western Australia to capitalise on its existing energy resources. With ideal conditions for solar, wind and local reserves of natural gas, Western Australian energy is already cleaner and more affordable than many competing markets.

In Western Australia, natural gas is directly responsible for 31.9% of the state's electricity generation, emerging as the largest contribution to energy generation.⁷⁴ Natural gas creates less emissions compared to coal when generating electricity, and also enables faster ramping speeds, allowing sites to scale output based on demand.^{75,76} This works well to support the energy needs of data centres, providing a baseload energy source which can power up as required.

In addition to natural gas, Western Australia's attractiveness lies in its potential to supply gigawatts of renewable energy to data centres through projects. With this, there is also an opportunity to co-locate battery storage with data centres, essentially creating a virtual power plant for the community. This would help improve the social licence of data centres in regional and remote communities.

Further, Western Australia is also well poised to capitalise on home-grown technologies which serve to minimise power consumption, such as innovative cooling solutions.

In combination, these attributes make WA's energy profile an attractive option for further data centre investment. However, to underpin these efforts, the State Government must be cognisant of the need to ensure secure, reliable and affordable supply of energy. Gas and electricity prices have climbed over recent years, with some businesses warning that a continuation of the trend would likely undermine WA's global competitiveness.

A key issue in this respect is rising transmission costs, which comprises two-thirds of the costs associated with drawing from the grid – a figure that local operators say is hampering competitiveness. In addition, a CCIWA member shared that there are locations unable to support new data centre capacity due to the grid being close to capacity, creating connection delays of between 12 to 18 months.

Given WA's access to natural gas resources, our State has other mechanisms at its disposal to offer globally competitive fast-tracked opportunities for investment. By colocating data centres in proximity to gas turbines, affordable and stable energy can be offered to bypass the problematic transmission costs flagged by industry and attract investment.

These colocations offer a solution for rapidly deploying data centres by connecting data centres directly to the point at which energy is generated. This would preserve WA's

⁷⁶ Renewable and Sustainable Energy Reviews (82.1), Gonzalez-Salazar M.A et. al. <u>Review of the operational flexibility and emissions of gasand coal-fired power plants in a future with growing renewables</u>. February 2018.



⁷³ Data Center Dynamics. <u>Eirgrid warns Irish government "mass exodus" of data centers possible without connection agreements</u>. August 2024

⁷⁴ Open Electricity. <u>Western Australia (SWIS)</u>. January 2025.

⁷⁵ U.S. Energy Information. <u>Natural gas and the environment</u>. April 2024.

energy grid, address grid connection delays and reduce the risk of increased electricity prices for consumers.⁷⁷

In a similar vein, local WA innovators are pioneering data centres that leverage our abundant natural gas reserves and high-capacity renewables through a co-location model. As an example, Geraldton is an ideal location with ready access to renewable power from both wind and solar. This strategy not only underpins an immediate, scalable power supply but also provides a faster, more cost-effective path to market, circumventing the grid security and transmission cost issues that plague East Coast competitors.

The partnership between Engine No.1 and Chevron is a key example of progress in this regard. The partners endeavour to create "power foundries" using GE Vernova equipment to ensure scalable, reliable power solutions for data centres located in the U.S. This underpins the desire of the United States to harness its energy resources to drive the next generation of AI products and services. To this, the founder and Chief Investment Officer of Engine No.1 stated:

Energy is the key to America's AI dominance. By using abundant domestic natural gas to generate electricity directly connected to data centers [sic], we can secure AI leadership, drive productivity gains across our economy and restore America's standing as an industrial superpower. This partnership with Chevron and GE Vernova addresses the biggest energy challenge we face.⁷⁸

A strong diversification agenda

The long-term strength of Western Australia's economy requires public and private investment in diverse industries. Technology requirements across these burgeoning industries drive demand for data centres, due to their cloud computing, AI processing and other functionalities.⁷⁹

In Western Australia, successive State Governments have committed to the diversification of WA's economy. One of the industries highlighted by the Diversify WA framework is defence, driven by key AUKUS activities occurring in WA due to our strategic location.⁸⁰

Pillar 2 of the AUKUS agreement codifies advanced technology cooperation between the signatory states, so high security data and technology is generated and shared on a regular basis. This includes the data that supports Al programs that can detect and track military targets.⁸¹ WA is the ideal location for data centre businesses to capitalise on this increased demand, given our geographical location and energy generation capacity.

Additionally, Australia's data centre market is facing heightened demand as data sovereignty expectations continue to increase.⁸² This is even more so the case when the data is highly sensitive defence data, which should be supported by secure local data

⁸² Colliers. The Race for Data Sovereignty | Why more Australian data is staying home and what this means for the data centre property market. September 2025.



⁷⁷ Chevron. Engine no. 1, Chevron and GE Vernova to power U.S. data centers. January 2025.

⁷⁸ Ibid.

⁷⁹ HSBC. <u>Data centres: The key infrastructure for digitization</u>. April 2025.

 $^{^{80}}$ Government of Western Australia. $\underline{\text{Diversify WA: 2024 Update}}.$ December 2024.

⁸¹ Broinowksi, A. <u>AUKUS Pillar 2</u>. Parliament of Australia. August 2024.

environments to mitigate the risk that the data is obtained by actors outside of AUKUS.⁸³

Investment in WA-based data centres to support defence industries is already underway. In August 2025, CDC Data Centres announced their intention to build a high-density facility to respond to WA's increasing importance in the region as a base of AUKUS activities. ⁸⁴ Further investment will enable the Australian Defence Force and allies to maintain data sovereignty and security, making WA ideal for data centre investment.

Investment is heating up

The race is heating up between states within Australia seeking to attract data centre capital, with both industry and investors alike having flagged that planning and approval processes must be streamlined Australia-wide to fuel Australia's digital economy.⁸⁵

In the NSW 2025-26 State Budget, \$17.7m was made available to unlock infrastructure investment, including in data centres, with the creation of the new Investment Delivery Authority. ⁸⁶ This new Authority is tasked with accelerating approvals for major projects, including projects in technology and energy. This is expected to address red tape issues, streamline communications between departments and help investors to navigate planning processes.

In WA, the recent introduction of the *State Development Bill 2025* provides a similar framework that enables the State to consolidate and coordinate planning, assessment and approval processes, through Priority Projects and State Development Areas. Whether data centre developments constitute priority projects remains to be seen.

Nevertheless, these regulatory changes are important signals to attract investment in cutting edge digital infrastructure and must continue if we are to compete for international investment.

In other jurisdictions, there are attractive incentives being offered, which is underpinning significant volumes of data centre investment. Texas and Louisiana are cases in point with multi-billions of data centre investment in the pipeline.

The large tax development incentive, which significantly lowers the barriers for investment is a key reason Texas has had a data centre boom. In addition, it's abundance of available energy, primarily shale gas, and a business-friendly regulatory environment, including the Sales Tax Exemption, are key.^{87,88}As a result, it is estimated that, in 2024, about 10% of the U.S. data centre workforce was employed in Texas, and investment had increased 38% between 2018 and 2024.⁸⁹

⁸⁹ Texas Economic Development Corporation. <u>How data centers benefit Texas communities</u>. May 2025



⁸³ AUKUS Forum. <u>AUKUS, Cybersecurity & the Future of Trusted Information Sharing</u>. August 2025.

⁸⁴ Financial Review. <u>AUKUS prompts data centre operator to plan \$415m Perth project</u>. August 2025.

⁸⁵ ITBrief Australia. NSW launches authority to drive AUD \$50 billion digital project. June 2025.

⁸⁶ NSW Government. <u>Investment Delivery Authority to turbocharge business investment in NSW.</u> June 2025.

⁸⁷ Guo, K. <u>Data centers are booming in Texas. What does that mean for the grid?</u> The Texas Tribune. January 2025.

⁸⁸ TRG Datacentres. <u>Texas data centre markets are booming.</u>

In the Asia Pacific region (APAC), the competition to be a destination of choice for data centre investment is intensifying. Indonesia, Malaysia, and Singapore are leading the way with tax and regulatory incentives.

Figure 3 sets out some examples of these incentives provided in both tax and other regulations to set their country forward as a hub for data centres.

Figure 3: Incentives offered in Indonesia, Malaysia, and Singapore to drive data centre investment 90,91,92

Country	Key Tax Incentives	Regulatory Incentives	Other Notes
Indonesia	 Corporate income "tax holiday" is given to pioneer industries, which includes data centres: up to 100% Corporate Income Tax exemption for 5–20 years, depending on investment size. Additional 50% Corporate Income Tax reduction for 2 years after the holiday. 	Indonesia's Online Single Submission (OSS) System allows for a single submission for multiple business licenses. Some projects can access import duty exemptions on machinery via the Masterlist facility.	Memorandum of Understanding with business community to create public-private partnerships.
Malaysia	 Malaysia's Digital Ecosystem Acceleration Scheme (DESAC) creates incentives through: Investment Tax Allowance up to 100% of Capex, offsetable against up to 100% of income for 10 years. Reduced corporate tax rates between 0 to 10%, which is subject to sustainability conditions set by DESAC. 	Guideline for Sustainable Development of Data Centres (Dec 2024) sets power and water usage requirements and other sustainability metrics that projects must meet to access DESAC funding and support.	This strategy has worked to implement substantial investments from international technology companies such as Google, Microsoft and Nvidia.
Singapore	 Pioneer Certificate provides tax exemptions or reduced rates for 5-15 years. Development and Expansion incentive which offers corporate tax rates as low as 5% for companies expanding or upgrading business activities in Singapore. 	Singapore provides investment allowances for: • emissions reduction capital expenditure; • energy efficiency grants including for retrofitting equipment; • resource efficiency grants for emissions.	Singapore continues to be very selective in accepting data centres since the removal of a moratorium on data centres. However, the low corporate tax rate of 17% is among lowest in region, which helps enhance attractiveness investment.

 $^{^{\}rm 90}$ King & Wood Mallesons. $\underline{\text{Navigating Data Centre Opportunities across APAC}}.$ July 2025.

<u>Sustainable Economic Growth</u>. June 2025.

92 DataCenter Knowledge. Eddy N. <u>Singapore Data Centers: Pocket-Sized Powerhouse Primed for Growth</u>. June 2025.



⁹¹ Ministry of National Development Planning (Bappenas). <u>Media release: Bappenas Partners with IBC to Strengthen Role of Business in Sustainable Economic Growth. June 2025.</u>

At the very least, to be competitive on a global scale, we need to get the basics right. Having reliable and affordable energy is key, sitting alongside efficient and transparent regulatory frameworks that support and facilitate investment.

In addition, CCIWA's engagement revealed that the lack of funding and support for Carbon Capture Utilisation and Storage (CCUS), which would be required to lower the emissions profile of data centres, and the declining baselines required by the Safeguard Mechanism could be emerging issues that need to be considered.

Conclusion

Data centres encourage investment in local economies, expand skilled workforces, create new avenues for tax revenue, and diversify economies. Supporting data centre investment could unlock important economic benefits for WA, both in supporting existing industries and capitalising on data growth in international markets.

As the digital economy, and applications such as AI, increasingly transform economies globally, energy demand associated with data centres will continue to spike. This will become an ongoing challenge for many existing data centre markets as concerns about grid stability and emissions targets move further front and centre. Under such conditions, lucrative opportunities exist for those markets able to step in and meet market demand.

Western Australia is uniquely positioned to do so, with the right energy mix, geography and strategic location in our favour. Local WA innovators are also making significant inroads in addressing the energy and water-hungry needs of data centres. Building WA's data centre market would not only underpin the competitiveness of existing industries but drive the diversification of our State's economy as well. However, as our recommendations outline, there is some work to do to capitalise on this emerging opportunity.



Recommendations



RECOMMENDATION 1: DEVELOP A COMPREHENSIVE DATA CENTRE STRATEGY

The State Government should develop a Data Centre Strategy. The Strategy should identify specific locations for the development of data centres, including low-latency edge data centres, across the State.

This will require the State Government to ensure sites:

- are turnkey for proponents to develop without delay. Relevant approvals would need to be fast-tracked to enable this.
- have access to affordable, cleaner and reliable electricity, including through off-grid energy generation (such as access to natural gas turbines and renewables).



RECOMMENDATION 2: DEVELOP AN INVESTMENT-FRIENDLY POLICY ENVIRONMENT

The Federal Government should ensure the right policy settings to attract data centre investment. This should include:

- policies that encourage and support CCUS investment, including funding, to support increased investment in direct air capture and other CCUS technologies required by high-emitting industries, including data centres.
- ensuring the planned review of the Safeguard Mechanism has a focus on the policy's impact on global competitiveness of local industry.
- implementing in full, and expediting the actions under the Future Gas Strategy, including by addressing the challenges associated with *Regulation 11A of the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009.*



RECOMMENDATION 3: LEVERAGE GAS TO ENSURE COMPETITIVE ENERGY SUPPLY

The State Government must continue to support energy project developments, including gas supply, to meet current and future energy demands of industry, including data centres. This includes:

- reviewing its recent environmental approval reforms to ensure they are delivering on the policy intent; and
- releasing and implementing the WA Gas Onshore Code of Practice regulations.



RECOMMENDATION 4: A GOVERNMENT TOUCHPOINT FOR DATA CENTRE PROPONENTS

The State Government should establish the new Department of Energy and Economic Diversification (DEED) as the government touchpoint for data centre proponents. DEED should work with trade offices to increase interest in foreign-based businesses storing their data in Western Australian data centres and work with the resources and data centre sectors to identify where opportunities may exist.





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CCIWA seeks to understand the views of all its members, and ultimately, in keeping with its Constitution, forms policy positions consistent with the long term interests of the overall economy, for the benefit of communities in WA

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