

Artificial intelligence and data centres

Submission to the Environment and
Communications References Committee

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Overview

1. The expansion of data centres in Australia is accelerating in response to growing demand for AI and digital services. This growth presents significant economic and strategic opportunities. At the same time, it raises a complex set of human rights considerations that require careful management.
2. Data centres are resource-intensive infrastructure. Their expansion is increasing demand for electricity and water, placing pressure on systems that are already constrained. While some impacts can be mitigated through improved efficiency and new energy sources, trade-offs remain and require deliberate policy choices.
3. The location and operation of data centres raise significant concerns for the right to adequate housing. Concentration in urban areas can affect the habitability and affordability of homes through localised heat effects, noise pollution, pressure on energy systems and competition for land.
4. At the same time, data centres have potential benefits that will be in the national interest. They underpin Australia's participation in the global digital economy and create opportunities for economic growth. Australia has a combination of geographic, social and political conditions that make it an appealing location for data centres.
5. These dynamics highlight that the expansion of data centres involves inherent trade-offs. The challenge for government is ensuring that where data centres are developed, this occurs in a way that maximises public benefit while ensuring that human rights are protected.
6. A coordinated and forward-looking legal and policy framework is required. This includes ensuring that infrastructure development is aligned with energy and water capacity, that communities are meaningfully engaged in decision-making and that safeguards are in place to prevent disproportionate impacts on groups. Data centre development should only proceed where robust legal, security and governance settings are in place to realise benefits and mitigate human rights risks, including those arising from both the data centre infrastructure and AI technology. Government must establish robust and trusted regulatory controls over data centres before allowing their expansion in Australia to ensure public confidence and protect fundamental human rights. By doing so, it will strengthen public confidence, protect human rights and ensure that the expansion of data centres in Australia occurs in a way that aligns with the national interest.

1 Positive impact of data centres in Australia

Australia's growing data centre sector supports economic development, digital capability and labour opportunities. Domestic infrastructure provides an opportunity to strengthen control over data, and with necessary commercial and legal settings could support privacy and regulatory oversight. It could potentially reduce risks associated with modern slavery and foreign access to sensitive information.

7. The location of data centres raises important issues of data sovereignty and regulatory control. Locating data centres within Australia helps ensure that these systems are subject to Australian law - rather than fragmented or inconsistent protections across other jurisdictions.
8. As set out in the National AI Plan, Australia is positioning itself as a leading destination for data centres,¹ with OpenAI's Sam Altman claiming that Australia could become the '... data centre capital of the world'.²
9. There are already 276 data centres in Australia, as the country is now one of the top five locations for data centres globally.³ This is largely due to Australia's location and connectivity to Asia, available land for construction, regulatory stability and potential to generate renewable energy.⁴ As noted by the Clean Energy Finance Corporation:

Data centres are critical infrastructure powering the modern digital economy. With the right policy settings, renewable generation and storage, and operational innovation, Australia can position itself as a leader in clean digital infrastructure.⁵

Labour and modern slavery

10. Westpac has indicated that the immediate investment pipeline of data centres projects will exceed \$155bn,⁶ suggesting that this would support a total of around 400,000 jobs.⁷ However, it is worth noting that employment opportunities will peak during construction phases where McKinsey estimates 1,500 jobs are created per data centre – before dwindling down to just more than 50 skilled jobs for operations.⁸
11. Articles 6 and 7 of the *International Covenant on Economic, Social and Cultural Rights* (ICESCR) provides that all people have a right to work – enabling them to secure '[a] decent living for themselves and their families'.⁹ In this context, projected growth in the data centre sector may contribute positively to the realisation of the right to work. This could occur through the creation of both

direct and indirect employment opportunities across construction, ICT, engineering and related services.

12. However, the extent to which these benefits are realised in practice will depend on the quality, accessibility and distribution of these jobs. This includes whether employment generated is secure and fairly remunerated, including for those in regional areas and marginalised groups (women, older workers, workers with disability etc) who may be underrepresented in construction, ICT and engineering industries. It should also mean that jobs created offset those that might be lost due to the development and deployment of AI more broadly.
13. By constructing and using data centres in Australia, technology companies may be required to report under Australia's modern slavery reporting regime (if they are not already required to do so). Under the *Modern Slavery Act 2018* (Cth), entities that carry on business in Australia and meet the relevant revenue threshold are required to assess and publicly report on modern slavery risks within their operations and global supply chains.¹⁰
14. Modern slavery risks associated with data centres are rarely located in the construction and operation of the facilities themselves but instead arise within complex global supply chains that are often opaque and difficult to monitor, particularly in the sourcing of materials and manufacturing of digital infrastructure components. For example, key inputs (such as cobalt, which is used in semiconductors and other electronic components) are often sourced from regions like the Democratic Republic of Congo, where mining has been widely linked to forced labour.¹¹ By locating data centre development within Australia, these supply chains are brought within the scope of Australia's modern slavery regulatory framework. This creates greater transparency and accountability, helping to address risks that may be less effectively regulated in jurisdictions with weaker (or non-existent) modern slavery laws. Australia should ensure strong legal and commercial terms provide adequate safeguards against human rights violations so that this potential benefit is fully realised, including strengthening modern slavery laws as recommended by the McMillan Review.¹²

Enabling Access to Essential Services

15. Data centres function as foundational digital infrastructure that underpin cloud computing, AI and internet services. Australian Bureau of Statistics data highlights that data centres provide the storage and processing power that enable cloud computing and AI systems, with broader impacts arising indirectly through the uptake of these technologies across sectors.¹³
16. Through enabling these systems, they indirectly support the delivery of services including access to information and communication, healthcare (e.g. telehealth and digital health records), education (e.g. online learning) and digital public

services.¹⁴ By facilitating these services, data centres can facilitate the realisation of rights related to health,¹⁵ access to information,¹⁶ education and more.¹⁷

Protection of data

17. Locating data centres in Australia can enhance data protection by ensuring that information is subject to Australian legal frameworks and oversight, reducing exposure to foreign jurisdictions and simplifying compliance. However, the location of infrastructure alone does not guarantee security or privacy, which ultimately depend on governance, cybersecurity practices and privacy legislation.
18. The localisation of AI infrastructure in Australia may also contribute to protecting national security and reducing risks of foreign interference. Where AI systems and the underlying compute infrastructure are hosted domestically, governments and organisations could with appropriate technical, legal and contractual controls retain greater control over how data is stored, processed and accessed.¹⁸ This can reduce exposure of data generated in Australia to foreign jurisdictions whose laws may permit access to data by external authorities. Ensuring that there are strong, transparent controls over data access, ownership, and use are essential to building and maintaining public trust in government's use and governance of emerging technologies.
19. The location of data infrastructure is also closely connected to the protection of the right to privacy. The large-scale collection and processing of data creates risks of misuse and surveillance. Keeping this data within Australia's legal framework supports the effective application and enforcement of domestic privacy laws. This underscores the importance of progressing tranche two of the *Privacy Act 1988* (Cth) reforms, which would introduce mandatory privacy impact assessments requiring organisations to identify, assess and mitigate privacy risks associated with high-risk data processing activities undertaken in data centres.¹⁹

2 Right to a clean, healthy and sustainable environment

Expansion of data centres raises a distinct set of environmental considerations that engage the right to a clean, healthy and sustainable environment. This section examines how the growth of data centre infrastructure interacts with Australia's environmental context, before analysing the key pressures it places on electricity and water systems. It considers how these impacts may affect the enjoyment of human rights and highlights the need for policy settings that align industry development with environmental limits and sustainability objectives.

20. The right to a clean, healthy and sustainable environment recognises that all people are entitled to environmental conditions necessary for a life of dignity and wellbeing.²⁰ This includes clean air, safe water, a stable climate and healthy ecosystems. The right requires countries to prevent environmental harm and take effective action to address climate change.²¹ Australia has committed to the right to a healthy environment, voting in favour of the UN resolution recognising this right.²²
21. The rollout of data centres is occurring within the Australian environmental context. Australia is an arid country that is prone to natural hazards (e.g. bushfires, floods),²³ which are increasingly impacting everyday Australians.²⁴ As of 2022 the Senate Select Committee on Australia's Disaster Resilience has noted that there were an estimated 70% of people were living in a Local Government Area impacted by at least one disaster – a figure that is double the annual average across the last 10 years.²⁵
22. The expansion of data centres sits at the intersection of a changing environment and AI expansion. Pursuit of legitimate economic and technological development can enhance the realisation of human rights, but it also places large and growing demands on energy and water systems that are already under pressure.²⁶ Other environmental impacts include electronic waste, such as obsolete servers, hard disks and network cabling. This creates a policy challenge: how to support digital infrastructure that underpins modern life while ensuring that its environmental footprint does not end up undermining the enjoyment of human rights.

Pressure on electrical and water systems

23. Data centres are highly resource-intensive infrastructure with significant demands on electricity and water.²⁷ As these facilities scale to support growing AI use, their resource-use raises questions about sustainability and human rights impacts.

Electricity use

24. Electricity consumption is a primary driver of the environmental footprint and pollution of data centres.²⁸ As demand for AI grows, energy use is increasing rapidly and placing sustained pressure on generation capacity. The Australian Energy Market Commission Chair has said hyperscale data centres can need as much electricity as a small city.²⁹ If the proposed 1GW Sydney data centre goes ahead (which would be one of the biggest in the world),³⁰ the Climate Council reports it could use the equivalent of almost half the power from Victoria's Loy Yang A coal power plant.³¹
25. Currently Australia's growing number of data centres use just over 2% of the power in Australia's main grid.³² But international experience demonstrates how quickly data centre energy demand can dominate a national energy system. In Ireland, data centre electricity use has more than tripled since 2015 and accounted for 18% of total demand in 2022,³³ with projections suggesting it could approach 28% by 2031 without corresponding increases in generation capacity.³⁴ Denmark is on a similar trajectory, with data centre consumption projected to increase sixfold by 2030 to almost 15% of national electricity use.³⁵ The International Energy Agency has further estimated that data centres will drive more than 20 per cent of electricity demand between now and 2030.³⁶ These examples illustrate the speed and scale at which data centre growth can reshape energy systems, with implications for supply and decarbonisation pathways.
26. The rapid increases in energy demand from data centres also raise system-level challenges. Without coordinated planning, this risks placing pressure on electricity prices and reliability. The pressure of rising electricity costs can indirectly impact human rights, including the right to an adequate standard of living³⁷ comprising food, housing³⁸ (discussed further below) and health (e.g. people unable to afford to keep their houses cool during extreme heat waves).³⁹
27. With Australia's energy transition well underway, the State and Federal governments must work together to ensure that the growth of the data centre industry is matched by timely investment in new generation, storage and network capacity, consistent with Australia's decarbonisation objectives. Without this, the rising electricity demand from data centres will undermine the right to a clean, healthy and sustainable environment.

Water use

28. Water use is a significant component of data centre operations. Data centres generate significant amounts of heat that is usually managed through water, air or a combination of both.⁴⁰ Sydney Water estimates data centres currently use around 3.5 billion litres of drinking water each year (less than 1% of total

demand).⁴¹ However, the rollout of multiple large scale data centres across the country will likely drive water usage up at scale (similarly to energy demands discussed above). Water Services Association of Australia reports estimates that within the next decade, data centres could use up to 15-20% of water supply.⁴²

29. Australia's water-sharing frameworks reflect ongoing tensions in managing a scarce resource across competing needs. They highlight the real economic, environmental, cultural and social trade-offs that arise when demand exceeds supply.⁴³ Climate change will not only impact rainfall patterns and water supply, but increase temperatures – all leading to an increase in water demand.⁴⁴
30. The growing demand for water has potential implications for a range of human rights. Pressure on Australia's water supply raises concerns not only for the right to a clean, healthy and sustainable environment, but also for the right to life in an arid country with finite resources.⁴⁵ Where water is prioritised for economically valuable data centre operations over other uses such as agriculture, this may exacerbate existing pressures on farmers and weaken domestic food production.⁴⁶ In turn, reduced food supply and rising costs may have downstream impacts on food security, particularly at a time when households are already facing increasing cost-of-living pressures. The dollar value generated per unit of water in data centres compared to agriculture does not fully capture the broader trade-offs, as agricultural and ecosystem water needs underpin food security, regional livelihoods, environmental sustainability and cultural practices in ways that extend well beyond this metric.⁴⁷
31. There are also concerns that the use of land and water may impact Aboriginal and Torres Islander communities living in areas already experiencing significant resource strain.
32. While some impacts of data centres can be mitigated through energy efficiencies and improved generation capacity, there remain limited viable alternatives to water-intensive cooling at scale. Increasing water use therefore has the potential to place data centre operations in tension with the right to a clean, healthy and sustainable environment, particularly in water-stressed regions. The combined resource demands of data centres require a coordinated policy response that aligns industry development with environmental limits and human rights obligations – a point that is not sufficiently recognised in Australia's current national AI Plan.

3 Right to housing

The expansion of data centres raises serious issues for the right to adequate housing, particularly in relation to the location and operation within urban environments. This section examines how data centres affect housing through impacts on habitability (particularly heat and noise) as well as affordability and broader community experiences.

33. Data centres are usually located near larger populations because they rely on strong electricity networks, superior telecommunications infrastructure and access to a sufficiently large pool of skilled labour.⁴⁸ Logically this means that data centres tend to avoid remote and regional areas because they do not offer the same supporting infrastructure needed to run efficiently (without significant investment in that supporting infrastructure). Because of their location they can pose risks to the right to housing, particularly where development places pressure on local housing markets.
34. The right to adequate housing is protected under Article 11 of ICESCR as part of the right to an adequate standard of living. The right to housing is more than just people having shelter,⁴⁹ it is about ensuring Australians have a decent quality of life.⁵⁰ As noted by the Special Rapporteur on the right to adequate housing, 'housing has an inherent social value'.⁵¹ For housing to be adequate, it must be 'habitable' and 'affordable'.⁵²

Habitability

35. For housing to be habitable it must provide physical safe space for occupants – protecting them from weather conditions and other threats to health (disease, pollution etc).⁵³ Data centres undermine habitability by increasing temperatures and noise pollution.

Heat impacts on housing

36. Australia is prone to natural hazards,⁵⁴ which are becoming more severe and frequent as global temperatures rise.⁵⁵ Increasing temperatures contribute to more extreme heat events, intensify bushfire risk and exacerbate severe weather such as storms and flooding.⁵⁶
37. As noted by the Special Rapporteur on the right to adequate housing, 'the climate crisis is also a housing crisis'.⁵⁷ While these pressures are being experienced globally,⁵⁸ their effects are particularly pronounced in a country like Australia that already faces significant climate variability and exposure to natural hazards (e.g. bushfires, floods, major storms and cyclones).
38. In addition to destructive natural events, rising global temperatures are also driving slower-onset changes⁵⁹ which are already affecting habitability

(particularly of coastal communities) and contributing to displacement.⁶⁰ Natural disasters and slow-onset events saw 30 million people globally displaced in 2020 alone.⁶¹ Data centres form part of this broader dynamic: their high energy consumption contributes to increased demand on electricity systems which,⁶² primarily through gas emissions, can contribute to rising global temperatures. These broader climate pressures are compounded by local effects associated with data centres, including their contribution to urban heat.

39. The urban heat island effect is where concentrated industrial activities, synthetic materials and energy consumption increases temperatures in the surrounding urban area.⁶³ Early research is indicating that data centre downwind air temperature can warm by up to 2.2°C, with average downwind air temperatures 0.7–0.9 °C warmer than corresponding areas upwind of data centres.⁶⁴
40. Exposure to elevated temperatures of this kind is associated with increased risks to human health, including heat stress, cardiovascular strain and heightened mortality during extreme heat events.⁶⁵ The World Health Organization has recognised that housing plays a critical role in protecting individuals from temperature extremes, and that both high indoor and outdoor temperatures can undermine health, safety and wellbeing.⁶⁶
41. Data centres are generally built near cities,⁶⁷ with around three quarters of Australia's data centres currently expected to be developed in Sydney and Melbourne.⁶⁸ This growth is concentrated in Western Sydney and Melbourne's northern and western suburbs.⁶⁹
42. Urban heat is already a growing risk in cities, where built environments can intensify temperature exposure and reduce the capacity of housing to provide safe thermal conditions.⁷⁰
43. As temperatures increase, the added heat burden in areas with nearby data centres undermines the habitability of nearby homes. Where housing cannot maintain safe indoor temperatures, it may fail to provide the protection from environmental conditions required under the habitability component of the right to adequate housing.⁷¹ In this way, rising ambient temperatures, compounded by localised heat effects, can directly interfere with the enjoyment of the right to adequate housing.

Noise

44. Data centres generate continuous noise as part of their ordinary operation on a 24-hour basis. This noise is typically characterised by a persistent low-frequency hum.⁷² Early measurements of some data centres have found that the noise to be between 40 – 59 decibels, although the exact noise will vary from location to location.⁷³ While this is unlikely to damage hearing, it is at levels that the US

Environmental Protection Agency claims ‘... reduce people’s ability to work, sleep and exercise’.⁷⁴

45. Occupants living near data centres, are increasingly reporting ongoing exposure to constant noise.⁷⁵ The World Health Organization has identified environmental noise as a significant risk to human health, linking sustained exposure to sleep disturbance, cardiovascular disease and adverse mental health effects.⁷⁶
46. Because of the impact on health, these impacts directly engage the right to adequate housing, which requires housing to provide a safe and healthy living environment for occupants.⁷⁷
47. Where data centres are located in close proximity to residential areas, noise pollution may negatively impact the health of residents and by connection the habitability of homes and the right to housing.

Affordability

48. For housing to be adequate, it must be affordable. This means that the cost of housing should not compromise a person’s ability to access other basic needs and rights such as food, healthcare and energy.⁷⁸ Data centres may affect housing affordability through their impact on energy systems and land use.
49. Data centres are increasing demand for electricity,⁷⁹ which can place upward pressure on energy prices (where supply does not keep pace with new demand).⁸⁰ Increases in electricity costs are placing pressure on households, with energy bills rising across all regions and contributing to broader cost-of-living pressures and difficulties in meeting ongoing expenses.⁸¹
50. In addition to energy costs, locating data centres in urban areas may affect housing affordability by intensifying competition for land, particularly in cities already experiencing housing shortages. Where land is allocated to large-scale industrial uses rather than residential development, this may contribute to constraints on housing supply and put upward pressure on housing prices.⁸²
51. Taken together, both factors indicate that the expansion of data centres has the potential to exacerbate existing affordability challenges. In this way, data centre development may engage the affordability dimension of the right to adequate housing, by increasing the availability and cost of buying and maintaining a home.

Impact on communities

52. The locations of data centres often overlap with communities already experiencing existing environmental and socio-economic pressures, including higher exposure to heat, lower tree canopy and rapid urban development.

53. Western Sydney illustrates this, as the region is home to more than 2.5 million people and is typically 6–10°C hotter than eastern Sydney during extreme heat events.⁸³ At the same time, it is one of the most culturally and linguistically diverse parts of Australia, with a large proportion of Aboriginal and Torres Strait Islander people, born overseas or speaking a language other than English at home.⁸⁴
54. The concentration of data centres in these areas means that their impacts on habitability and affordability are more likely to be experienced by communities already exposed to environmental stressors. In this way, data centre development can compound existing vulnerabilities. Where these impacts reduce the liveability of homes, they may deepen existing inequalities in the enjoyment of the right to adequate housing.
55. Finally, concerns have also been raised about the pace at which data centre developments are approved, with limited opportunities for affected communities to meaningfully engage in decision-making processes.⁸⁵ Where consultation is inadequate and information is not effectively disclosed, this may undermine the right to access information and participate in decisions with real consequences, further compounding the human rights impacts experienced by affected communities.⁸⁶

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- ⁴³ See e.g. *Murray–Darling Basin Authority, The Murray–Darling Basin Agreement* (Web Page) <<https://www.mdba.gov.au/water-use/allocations/murray-darling-basin-agreement>>.
- ⁴⁴ Climate Council of Australia, *Climate Council Submission: Infrastructure NSW Data Centres Consultation* (Report, 7 May 2026) 11.
- ⁴⁵ *ICCPR*, art 6.
- ⁴⁶ Agriculture, forestry and fishing consumed about two-thirds of total sector specific water consumption – nearly 11.8 million megalitres. This water was used to produce goods valued at \$54.6 billion (roughly \$4,600 for every megalitre consumed). Compare this to ‘other industries’, the category covering data centres. A megalitre of water in this sector was valued at \$2.3 million – 500 times more value than if used on a farm. Michael Vardon, ‘How much water and power will AI data centres use in Australia? Ironically, we don’t have the data to know’, *The Conversation* (online, 03 June 2026) <<https://theconversation.com/how-much-water-and-power-will-ai-data-centres-use-in-australia-ironically-we-dont-have-the-data-to-know-284069>>; See also Australian Bureau of Statistics, *Water Account, Australia* (Web Page) <<https://www.abs.gov.au/statistics/economy/national-accounts>>. However, it is worth noting that reliable data is still not widely available in Australia, so this information is not as accurate as it could be.
- ⁴⁷ See *ICCPR* art 27; *ICESCR* art 15.
- ⁴⁸ PWC, *Data centre valuation: The billion-dollar question* (Web Page) <<https://www.pwc.com.au/real-estate/data-centre-valuation.html>>.
- ⁴⁹ Raquel Rolnik, *Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context* (Report, 20 December 2010, UN doc A/HRC/16/42) 6 [14].
- ⁵⁰ See generally OHCHR, *The Right to Adequate Housing* (Fact Sheet, No 21/Rev1).
- ⁵¹ Raquel Rolnik, *Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context* (Report, 20 December 2010, UN doc A/HRC/16/42) 6 [14].
- ⁵² See generally UN Committee on Economic, Social and Cultural Rights, *General Comment No. 4: The Right to Adequate Housing (Art. 11 (1) of the Covenant)* (UN doc E/1992/23, 13 December 1991); see also UN Committee on Economic, Social and Cultural Rights, *General Comment No. 7: The right to adequate housing (Art.11.1): forced evictions* (E/1998/22, 20 May 1997); UN Office of the High Commissioner of Human Rights, *The human right to adequate housing* (Web Page) <<https://www.ohchr.org/en/special-procedures/sr-housing/human-right-adequate-housing>>.
- ⁵³ Office of the High Commissioner for Human Rights, *The Right to Adequate Housing* (Fact Sheet No 21/Rev 1, 2014) 4.
- ⁵⁴ Australian Housing and Urban Research Institute, *Integrating housing policy, settlement planning and disaster management* (Final Report No. 435, February 2025) 7.
- ⁵⁵ Australian Human Rights Commission, *Human Rights on a Warming Earth* (Report, 06 November 2025) 6; Australian Housing and Urban Research Institute, *Inquiry into housing policy and disaster: better coordinating actors, responses and data* (Final report No. 444, July 2025) 1.
- ⁵⁶ NASA, *Extreme Weather and Climate Change* (Web Page) <<https://science.nasa.gov/climate-change/extreme-weather/>>.
- ⁵⁷ Balakrishnan Rajagopal, *Towards a just transformation: climate crisis and the right to housing* (Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context, UN doc A/HRC/52/28, 23 December 2022) 3 [1].
- ⁵⁸ Balakrishnan Rajagopal, *Towards a just transformation: climate crisis and the right to housing* (Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context, UN doc A/HRC/52/28, 23 December 2022) 3 [1].
- ⁵⁹ NASA, *Extreme Weather and Climate Change* (Web Page) <<https://science.nasa.gov/climate-change/extreme-weather/>>.
- ⁶⁰ Balakrishnan Rajagopal, *Towards a just transformation: climate crisis and the right to housing* (Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context, UN doc A/HRC/52/28, 23 December 2022) 5 [11].

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- ⁶¹ Balakrishnan Rajagopal, *Towards a just transformation: climate crisis and the right to housing* (Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context, UN doc A/HRC/52/28, 23 December 2022) 5 [11].
- ⁶² See generally Oxford Economics Australia, *Data Centre Energy Demand* (Report, July 2025); see also Ernest & Young, *Powering the AI and digital surge: How can data centres within Australia navigate energy system capacity and other constraints?* (Report, 2026).
- ⁶³ Andrea Marinoni *et al.*, 'The data heat island effect: quantifying the impact of AI data centers in a warming world' (2026) *arXiv* 1, 2.
- ⁶⁴ David Sailor, Soroush Samareh Abolhassani & Eli P Martin, 'Data Center Waste Heat as an Emerging Urban Thermal Hazard: First Field Measurements of Neighborhood-Scale Air Temperature Impacts' (2026) 7(2) *Journal of Engineering for Sustainable Buildings and Cities* 1, 2.
- ⁶⁵ World Health Organization, *Heat and health* (Factsheet, Web Page) <<https://www.who.int/news-room/factsheets/detail/climate-change-heat-and-health>>.
- ⁶⁶ See generally World Health Organization, *Housing and health guidelines* (Report, 2018).
- ⁶⁷ Energy Council, *Data Centres and Energy Demand – What's Needed?* (Web Page) <<https://www.energycouncil.com.au/analysis/data-centres-and-energy-demand-what-s-needed/>>; Climate Council, *What does the data centre boom mean for Australia's switch to renewables?* (Web Page) <<https://www.climatecouncil.org.au/what-does-the-data-centre-boom-mean-for-australias-switch-to-renewables/>>; Commonwealth Scientific and Industrial Research Organisation, *Data Centres and the Energy Sector* (Report, 31 May 2021) 16.
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- ⁷⁰ World Health Organization, *Urban Health* (Factsheet, Web Page) <<https://www.who.int/news-room/factsheets/detail/urban-health>>.
- ⁷¹ Office of the High Commissioner for Human Rights, *The Right to Adequate Housing* (Fact Sheet No 21/Rev 1, 2014) 10.
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- ⁷³ Joint Legislative Audit and Review Commission, *Data Centers in Virginia* (Commission Draft, 09 December 2024) 75. However estimates on the exact decibel noise varies. See also Miguel Yañez-Barnuevo, 'Communities Are Raising Noise Pollution Concerns About Data Centers', *Environment and Energy Study institute* (online, 23 March 2026) <<https://www.eesi.org/articles/view/communities-are-raising-noise-pollution-concernsabout-data-centers>>.
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- ⁷⁷ Office of the High Commissioner for Human Rights, *The Right to Adequate Housing* (Fact Sheet No 21/Rev 1, 2014) 4.
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⁷⁹ See generally UN Environment Programme, *Sustainable Procurement Guidelines for Data Centres and Servers* (Report, 12 June 2025).

⁸⁰ See e.g. Energy Insights, *Bite-sized report: AER Wholesale Markets Quarterly — Q1 2025* (Web Page) <<https://blog.energy-insights.com.au/bite-sized-report-aer-wholesale-markets-quarterly-q1-2025>> which demonstrates that where energy is in demand, price tend to rise, although this reference is not specific to data centres.

⁸¹ See generally, Australian Energy Regulator, *State of the Energy Market 2024* (Report, 2024).

⁸² See generally Centre for Independent Studies, *Housing Affordability and Supply Restrictions* (Policy Paper 55, February 2024).

⁸³ Ed Husic, 'Beyond the data centre hype', *The Saturday Paper* (Online, 11 April 2026) <<https://www.thesaturdaypaper.com.au/comment/topic/2026/04/11/beyond-the-data-centre-hype>>.

⁸⁴ See e.g. Australian Bureau of Statistics, *QuickStats: 2021 Census Parramatta* (Web Page) <<https://www.abs.gov.au/census/find-census-data/quickstats/2021/LGA16260>>; Australian Bureau of Statistics, *QuickStats: 2021 Census South West* (Web Page) <<https://www.abs.gov.au/census/find-census-data/quickstats/2021/127>>; Australian Bureau of Statistics, *QuickStats: 2021 Census Blacktown* (Web Page) <<https://abs.gov.au/census/find-census-data/quickstats/2021/LGA10750>>.

⁸⁵ See generally Hoare Lea, *Powering Places: Integrated Planning Strategies for Datacentres & Communities* (Report, 30 May 2026); see also Annika Burgess, 'Locals affected by Ireland's AI data centre boom share 'cautionary tales'', *ABC News* (online, 15 June 2026) <<https://www.abc.net.au/news/2026-06-15/ai-data-centre-energy-impact-ireland-cautionary-tale/106758928>>.

⁸⁶ *ICCPR*, art 19(2).