



**CONSERVATION
COUNCIL** ACT REGION

Discussion Paper – Data Centre Development in the ACT

October 2026

The Conservation Council ACT Region is the peak body for environment and climate groups in the ACT Region. We represent close to 50 member groups, bringing together a united voice on environment and climate issues to Government, business and community.

Since 1981 we have been at the centre of the region's most important wins for wildlife, bushland, climate and communities. As a hub for the ACT Region's environment and climate movement and a not-for-profit, non government organisation, we run campaigns, promote and upskill local groups, undertake research, advocate passionately, and engage and inform our community.

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Executive Summary

The ACT Region is frequently cited by the ACT Government and technology industry stakeholders as an ideal location for future data centre development, owing to the region's relatively cool climate and close proximity to federal institutions. Indeed, the region is already the location of a number of data centres. The ACT Government estimates that there are more than 15 operational data centres in Canberra with further development proposals currently under assessment¹, while the Data Centre Map lists more than 29 data centres in industrial zones such as Hume, Beard and Fyshwick.²

On 26 August 2026, Chief Minister Andrew Barr announced the development of a new *ACT Data Centre Framework* intended to 'provide clear rules about where data centres can be located, the standards they must meet, and how proposals will be assessed.'³ The Framework, expected to be released as a draft in early 2027, is also intended to outline assessment criteria, sustainability requirements and infrastructure expectations for data centres in the ACT, including best-practice water efficiency and contributing to investment in renewable energy infrastructure.

The ACT Government's Statement of Ambition on Artificial Intelligence (AI), due to be released in the remainder of 2026, will outline the ACT Government's broader approach to AI, including 'harnessing the technology to drive innovation, strengthen business and industry, and empower workers.'⁴

Nationally, the Australian Government has released National Data Centre Expectations for large data centres, which it plans to legislate by early 2027.⁵ The Australian Government is expected to prioritise data centre development proposals that are most closely aligned with these expectations.

The Conservation Council of the ACT Region (the Conservation Council) is increasingly concerned with the rapid expansion of data centres in the ACT region. We have little confidence that the ACT Government's existing planning and environmental regulations are properly equipped to manage this rapid expansion of data centres and their far reaching impacts on our community and environment.

¹ ABC News (2026) *Data centres are already humming away in the ACT and there could be more coming*, 23 August. Available at: <https://www.abc.net.au/news/2026-08-23/act-data-centre-policy-already-aligned-with-national-ai-standard/106936530>

² Data Centre Map (2026) *Data centres in Canberra, Australia*. Available at: <https://www.datacentermap.com/australia/canberra/>

³ Barr, A. (2026) *Providing a clear framework for data centres in the ACT* [Media release], ACT Government, 26 August. Available at: https://www.cmtedd.act.gov.au/open_government/inform/act_government_media_releases/barr/2026/providing-a-clear-framework-for-data-centres-in-the-act

⁴ Ibid.

⁵ Albanese, A. (2026) *AI in Australia's interests* [Speech], University of Sydney, 15 July. Available at: <https://www.pm.gov.au/media/ai-australias-interests-0>

Moreover, we are concerned that the Chief Minister's willingness to advertise Canberra as a 'best-in-class location' for data centres will mean that environmental and community impacts will be overlooked in favour of the interests of big technology businesses.

Our nature and waterways in the ACT are already under enormous pressure - from land clearing for development, climate change and invasive species - without the added pressure of resource-intensive data centres. Therefore, in the absence of a comprehensive regulatory framework at both the ACT and Commonwealth levels, **the Conservation Council is calling for a moratorium on new and expanded data centre developments.**

Data centre proposals should not be assessed or approved before a strong regulatory framework has been legislated in the ACT, that outlines where data centres can be built, requires the construction of additional renewable energy infrastructure, and requires the use of water efficient technologies. A moratorium is also urgently needed to provide adequate time for deep and genuine engagement with the ACT community, including with First Nations peoples, on possible future data centre development in our region.

It appears that the ACT Government has made an assumption that data centre development in our region will be beneficial for Canberrans without consideration of planetary boundaries and the health, cohesion and wellbeing of our communities.

We consider this to be a false premise. The Conservation Council would challenge the notion that expanding data centre development, a product of increasing AI use (particularly the unrestrained use of large language models), is fundamentally good for our environment and communities. We strongly recommend hard constraints on new data centre developments, and would instead encourage more efficient and judicious use of the computing power we already have, for the most essential purposes. Data centres should not be developed without first clearly establishing their need and net benefits to the ACT.

This paper outlines the Conservation Council's initial policy position on data centre development in the ACT Region. It also highlights and analyses some of the key environmental issues associated with data centre development in the ACT.

The paper does not seek to address or answer all of the ethical questions associated with AI use itself and does not formally endorse nor discourage AI use. We recognise that many of our member groups and members of the ACT environmental community have differing opinions and beliefs about AI, and that there are circumstances where AI use may be warranted and have genuine benefits, including for conservation work and environmental protection. However, these benefits cannot justify embracing AI use and data centre development without any consideration of the environmental and social costs.

The ACT Government must take a precautionary approach to data centre development and implement strong regulations, as inadequate regulation today may create irreversible environmental problems in the future. Before such regulations are in place, we call for a moratorium on new and expanded data centre developments. Once the moratorium is lifted, data centres should operate under time-limited, revocable environmental licenses, and must keep meeting strengthened standards.

Recommendations

The Conservation Council recommends that the ACT Government:

1. Establish a moratorium on new and expanded data centre development until a strong regulatory framework is in place

The Conservation Council is calling for the ACT Government to adopt a moratorium on new and expanded data centre developments until strong new regulations are legislated in the ACT which meet or exceed any Commonwealth regulations.

2. Legislate a strong new ACT data centre regulatory framework

The ACT Government's forthcoming ACT Data Centre Framework must:

- a. **Include mandatory additional renewable energy requirements:** Data centres must be powered by their own additional renewable energy supply, at least equivalent to their additional electricity consumption and supported by appropriate storage and network capacity. This must not impact on the security or reliability of the ACT's existing 100% renewable energy supply or the ACT's emissions reduction targets. New renewable energy infrastructure must meet strong biodiversity standards.
- b. **Set limits on water use and prohibit data centre construction where no secure water supply exists:** Data centres should not be developed at sites where no sustainable water supply exists and regulations must include limits on potable and environmental water use. Water limits must account for future water security projections under climate change and drought scenarios, and the environmental water requirements of river systems, such as the environmental flows needed to sustain the function and health of the Upper Murrumbidgee River. Data centre developers must also be required to pay for the costs of additional water infrastructure, in line with the Commonwealth's proposed national standards. Data centres that use water for cooling must also be required to use the most water-efficient systems available.
- c. **Mandate transparent reporting of water use and energy use:** In the interest of transparency and accountability, data centres must be required to publicly report their water use, energy use and emissions profiles, including Water Usage Effectiveness and Power Usage Effectiveness metrics. Operators must also publicly report each facility's capacity, workload type (training, inference or storage) and customer category.
- d. **Exclude development on ecologically sensitive greenfield sites:** Data centre development should only occur in existing brownfield sites and those zoned for industrial use. Data centres must avoid ecologically sensitive greenfield areas as well as NUZ1 (Broadacre), NUZ2 (Rural) and NUZ3 (Hills, Ridges and Buffer Area) zones. Data centres must also be sited sufficiently far from residential areas to avoid ongoing noise impacts.
- e. **Require mandatory Environmental Impact Statements:** The Planning Act should be amended so that data centres above a certain size are a development type that must

undergo a full Environmental Impact Statement (EIS) assessment process. The EIS must specifically assess cumulative impacts, including impacts beyond the data centre footprint from substations, energy and water infrastructure, roads and backup generators.

- f. Include standards for responsible management, reuse and recycling of e-waste:** Data centre developers must be required to develop and implement waste management plans to responsibly manage e-waste, in line with the ACT Circular Economy Strategy.
- g. Establish minimum standards for the recovery or reuse of waste heat:** Data centre developers must be required to recover or reuse a minimum amount of waste heat generated from cooling systems - improving energy use efficiency and the sustainability of their operations.
- h. Require a time-limited, revocable environmental licence:** New and expanded data centres that pass a capacity threshold should require an environmental authorisation, issued for a fixed term and only renewed if the operator meets the standards in force at the renewal. In a declared emergency, the ACT Government should be able to vary or suspend the licence, including if there is a serious risk to the environment or public safety. The ACT already licenses high-risk activities this way through environmental authorisations.
- i. Regulate air pollution, including from backup generators:** Data centre air emissions, including from diesel backup generators and other fossil-fuel-based systems, must be assessed and regulated, with specific consideration of PM2.5 and other air pollutants, their cumulative impacts and their potential health effects on nearby communities.
- j. Enforce noise standards:** Noise standards must apply at data centre site boundaries and be enforced by the ACT Environment Protection Authority, with cumulative noise taken into account where facilities cluster.
- k. Require decision-makers to consider the right to a healthy environment:** Decision-makers assessing data centre proposals must have regard to the right to a clean, healthy and sustainable environment under section 27C of the Human Rights Act 2004 (ACT).
- l. Require proponents to demonstrate need and net benefit:** Data centre proposals must clearly establish their need and their net benefits to the ACT before they can be approved.

3. Conduct early and genuine community engagement on the forthcoming ACT Data Centre Framework

The Canberra community, especially those who will live alongside data centres, must be a part of the conversation regarding data centre development in our region, including First Nations people, environmental and community organisations, local academics, youth, and vulnerable people. Public acceptance of data centres will hinge on whether the projects deliver net community benefits.

Beyond standard YourSay consultations, the Conservation Council recommends that the ACT Government work in partnership with key stakeholders to develop strong regulatory settings that

are in the community's interest. Critical steps the Government should take include building community awareness, involving communities early in the planning process and developing more inclusive visions for Australia's data centre industry⁶. Aboriginal science, Caring for Country, and the involvement of Traditional Custodians should be integrated from the outset to inform site selection and ecological assessment.

The ACT Government also has a key responsibility to ensure that data centre developers build social licence and deliver local benefits. The ACT Data Centre Framework should include rules that make developments contingent on delivering measurable community benefits.

4. Undertake comprehensive energy and water-use assessments, including projected long-term consumption and potential impacts during drought conditions and future climate scenarios.

The ACT Government should undertake further research and assessment to determine the possible impacts of data centre development on the ACT's water and energy supply, and what this would mean for the environment and ACT water and energy users, including households, businesses and agriculture. In particular, assessments should examine impacts under potential future climate scenarios and drought conditions.

⁶ Cumbo, B. (2025) 'Australia is set to get more AI data centres. Local communities need to be more involved', *The Conversation*, 8 July. Available at: <https://theconversation.com/australia-is-set-to-get-more-ai-data-centres-local-communities-need-to-be-more-involved-259799>

Introduction

Why are Data Centres Rapidly Expanding?

Australia is one of the top regions in the world for data centre development.⁷ Globally, a significant proportion of data centre development has been driven by the rapid expansion of artificial intelligence systems, primarily large language models (LLMs) used by systems such as ChatGPT, Gemini and Claude, operated by major technology companies including OpenAI, Google, and Anthropic.

These systems rely heavily on GPU (Graphics Processing Unit) accelerated computing, which is substantially more energy-intensive than the relatively modest demands from earlier limited social media platforms, and generates significant heat loads, necessitating advanced cooling systems often water-dependent. This shift fundamentally alters the infrastructure footprint of data centres.

When data centres were first established in Canberra in the 2010s, global data demand was comparatively modest, and data storage and processing requirements and their associated energy and water demands were significantly lower.

Today, data centre developments are rapidly expanding across Australia, increasing demand for energy, water, land and other natural resources such as critical minerals. Data centres already draw approximately 2% of the total electricity on Australia's main grid, and the Australian Energy Market Operation (AEMO) forecasts this could triple to 6% by 2030⁸. In addition, most data centres require large volumes of water, between 5 and 40 million liters per day, including at peak usage times for other customers.⁹ In Sydney, approximately 0.7% of local water supply goes to data centres, forecast to rise to about 1.9% by 2030¹⁰.

Why is Canberra a Preferred Data Centre Location?

The ACT Government and industry stakeholders often cite Canberra's relatively cool climate, political stability, and proximity to federal institutions that are major clients as advantages for data centre development. However, the evidence base supporting Canberra as a sustainable long-term hub for AI data centres remains unclear, as do the claimed economic growth, jobs and broader community benefits. While Canberra Data Centres (CDC) states that its campuses in

⁷ Joshi, K. (2026) 'Australia's data centre lobby stumbles in its dance to avoid real regulation', *Crikey*, 4 March. Available at:

<https://www.crikey.com.au/2026/03/04/australian-data-centre-lobby-renewable-energy-regulation/>

⁸ Australian Energy Market Operator (AEMO) (2026) *Digital demand surge: Preparing Australia's power systems for the rise of data centres*, 1 June. Available at:

<https://www.aemo.com.au/newsroom/news-updates/digital-demand-surge>

⁹ Water Services Association of Australia (WSAA) (2025) *Data centres and water in Australia*, December. Available at:

<https://wsaa.asn.au/Common/Uploaded%20files/library/report/WSAA%20Data%20Centres%20and%20water%20in%20Australia%20-%20December%202025.pdf>

¹⁰ Mandala Partners (2025) *Data centres as enabling infrastructure*. Available at:

<https://mandalapartners.com/uploads/Data-Centres-as-Enabling-Infrastructure.pdf>

the ACT support around 230 ongoing jobs¹¹, as outlined by the Hon Dr Andrew Charlton MP in a speech to Sydney Institute, once built, data centres run with remarkably few people¹².

If the ACT Government cites government or national security purposes for data centre development in the ACT, it should publish what share of capacity serves those needs. Although computing for government purposes certainly occurs in the ACT, there is no transparency for the community to know what functions a data centre actually performs - meaning data centres could be used for purely commercial purposes, with no requirements to publicly disclose their operations. The ACT Government should require operators to disclose each facility's capacity, workload type (be it training, inference or storage) and customer categories, and make this data available publicly.

Key Issues

AI data centres are both energy-intensive and water-intensive. Cooling systems used in data centres, particularly evaporative cooling, can consume substantial volumes of water. On the other hand, circular cooling systems, built for water usage optimisation, typically require more energy. Data centres generate enormous waste heat; and the materials and colours used in the building itself can also contribute to urban heat island effects. Without a strong regulatory framework, there is a risk of locking the ACT into a high-demand infrastructure pathway that may not be sustainable under future climate conditions. Experts surveyed in a 2026 University of Queensland and MIT study estimated that there is a 12% chance AI's environmental harm will be catastrophic by 2030, even with pragmatic mitigations.¹³

Key concerns associated with data centre development in the ACT Region include:

- **Climate suitability claims:** While Canberra experiences cooler winters, it also faces prolonged and increasingly intense summer heatwaves (November–March). This raises questions about the reliability of climate-based cooling assumptions.
- **Water resource vulnerability:** Canberra is not currently classified as water-scarce, but projections under future climate change scenarios indicate increasing pressure on reservoirs and water security.
- **Biodiversity impacts:** The construction of data centres and associated enabling infrastructure inevitably requires land. If constructed on greenfield sites, data centres are likely to have significant impacts on biodiversity. In the ACT, our threatened grasslands and grassy woodlands, and the species that depend on them, are already under significant compounding threats from land clearing for development, climate change and invasive species. There is currently no mandatory requirement for data centre developments to undergo an Environmental Impact Statement assessment process.

¹¹ <https://cdc.com/resources/news/cdc-welcomes-act-governments-data-centre-framework-development/>

¹²

<https://www.minister.industry.gov.au/charlton/media/speech-sydney-institute-data-centres-honest-accounting>

¹³ Saeri et al. (2026), Prioritization of Risks from Artificial Intelligence: A Delphi Study of 272 International Experts, arxiv.org/abs/2606.04490. Risk to environment was rated by 34 experts. Catastrophic means over one million deaths, over US\$100 billion in losses, or civilisation-scale harm.

Previous data centre developments have instead been considered via an Environmental Significance Opinion given by the Conservator of Flora and Fauna, which includes no public comment window.

- **Cumulative impacts:** Little research has been undertaken on the cumulative environmental impacts of expanding existing data centre complexes in the ACT, including water use, energy demand, greenhouse gas emissions, noise, electronic waste, and heat generation.
- **Compatibility with the right to a healthy environment:** Under Section 27C of the *Human Rights Act 2004* (ACT), Canberrans have the right to a clean, healthy and sustainable environment. Given the potential impacts on climate, water resources and biodiversity, it is unclear how future data centre developments will be compatible with this human right. Decision-makers on data centre development must have regard to the right to a healthy environment.

Land-Use Considerations and Biodiversity Impacts

Undeniably, biodiversity is under threat in the ACT. Canberra's expanding footprint has immense effects on the environment through habitat clearance, disturbance of ecological communities, increased urban edge effects, and increased sedimentation and erosion. In 2023, the ACT was home to eight critically endangered, 21 endangered and 28 vulnerable species. The key threatening process identified was Unnatural Fragmentation of Habitats.¹⁴

In particular, grasslands and grassy woodlands face significant threats in the ACT Region as they are often perceived as 'empty paddocks' or vacant land. For instance, the Eastern Broadacre, identified by the ACT Government as possible future industrial land and currently undergoing federal environmental assessment, contains significant areas of the critically endangered ecological community of Natural Temperate Grassland, and provides habitat for threatened species such as the Canberra Grassland Earless Dragon.

Large-scale data centre development, roads, transmission infrastructure and associated construction activity is likely to disturb native flora and fauna, fragment habitats and alter ecological processes. Therefore, the ecological impacts of new or expanded data centres must be assessed beyond just the actual data centre footprint, and should include all impacts caused by associated substations, additional energy and water infrastructure, roads, or backup generators. To ensure this, data centres above a certain size should be required to undergo a full Environmental Impact Statement (EIS) assessment under the Planning Act, including assessment of cumulative environmental impacts, rather than the Environmental Significance Opinion process used to date.

¹⁴ Office of the Commissioner for Sustainability and the Environment (2023) *ACT State of the Environment 2023: Summary report*. Canberra: ACT Government. Available at: <https://www.actsoe2023.com.au/OCSE/ACT-State-of-the-Environment-Summary-Report-2023.pdf>

While the Chief Minister has indicated that data centre development will not occur in residential zones, development may be permitted to occur in industrial and 'certain non-urban zones'. The Conservation Council considers this is a vague definition that could potentially leave sites with significant ecological values and agricultural zones open to data centre development (particularly those sites within the Eastern Broadacre). In the interest of protecting and conserving biodiversity in the ACT, and maintaining sustainable local agricultural production, the ACT Government should exclude data centre development on ecologically sensitive greenfield sites, including NUZ1 (Broadacre), NUZ2 (Rural) and NUZ3 (Hills, Ridges and Buffer Areas) zones. Data centres should only be constructed on already disturbed brownfield sites.

Water

Data centre development presents a significant risk to the future water security and supply of the ACT, particularly under future climate scenarios and with expected population growth.

The 2025 ACT Water Security Vulnerability Assessment Technical Report outlines that, on average, the ACT region is projected to experience a 30% reduction in flows under a moderate climate change and population growth scenario as compared to the current scenario, and a 45% reduction under the more extreme climate change and high population growth scenario. Moreover, based on the current water supply network (infrastructure and operating rules) and per capita water demand, ACT's potable water supply storages are projected to run critically low, and temporary water restrictions are projected to impose economic costs of approximately AUD \$100 million per year under moderate climate change scenarios and up to AUD \$300 million under extreme scenarios.¹⁵

This leaves a number of questions regarding water efficiency and usage that the ACT Government and utility provider ICON Water should justify:

- Will existing water sources be sufficient under moderate and extreme climate scenarios to service Canberra's population and industrial uses?
- What additional demands could future data centre developments place on the ACT's water resources, particularly during drought periods?
- How are the economic costs (for additional water infrastructure and increased water demand) taken into account, for example in ICON Water's pricing proposals?
- How will water allocation be prioritised between residential, ecological, agricultural and industrial uses?
- Are alternative cooling technologies (e.g., air cooling, liquid immersion cooling) being considered to reduce water dependency?

Without robust planning for future water infrastructure, these developments may conflict with the ACT's long-term water security. The Conservation Council recommends that the ACT Data

¹⁵ ACT Government (2025) *ACT Water Security Vulnerability Assessment: Technical report*. Canberra: ACT Government. Available at: https://www.act.gov.au/_data/assets/pdf_file/0011/2868455/ACT-Water-Security-Vulnerability-Assessment-Technical-Report-2025.pdf

Centre Framework set limits on water use and prohibit data centre construction where no secure water supply exists. Data centres that use water for cooling must also be required to use the most water-efficient systems. Actual water use should be audited and publicly reported.

Energy

Even if the ACT can currently meet the energy demands of existing data centres, it remains uncertain whether the energy demands of future data centre development can be met without causing significant disruption to supply, reliability, and energy prices for Canberrans. Indeed, the enormous growth in power demand from AI data centres has the potential to undermine Australia's renewable energy transition, as jurisdictions struggle to keep up with the speed and scale of new renewable infrastructure required.

The demand of data centres from the grid in the ACT is substantial. CDC's first data centre in Beard, still under development, is expected to have a total capacity of 40 MW, which is more than 5% of the entire ACT's highest recorded peak (732 MW) electricity demand in 2025¹⁶. Recently, CDC has also won approval for their biggest data centre to date, Beard 2, which would have an 84MW capacity¹⁷, increasing pressure on the grid. While some data centre companies in Australia have made commitments to increase renewable energy use and invest in sustainable operations, many facilities still rely heavily on the fossil fuel powered electricity grid and backup diesel generators.

The ACT Government and Evoenergy will need to consider the following questions:

- If renewable energy is to meet this demand, has the ACT Government adequately forecasted the land requirements for new solar or wind infrastructure and the potential impacts to biodiversity?
- Has the ACT Government assessed the cumulative energy requirements of expanded data centre operations and their impact on the electricity grid, including under climate change and population growth scenarios?
- Has the ACT Government considered the waste heat output of data centre developments and their potential contribution to urban heat island effects?
- How will data centre development impact energy pricing for Canberrans, including vulnerable groups?

¹⁶ ABC News (2026) *Data centres are already humming away in the ACT and there could be more coming*, 23 August. Available at: <https://www.abc.net.au/news/2026-08-23/act-data-centre-policy-already-aligned-with-national-ai-standard/106936530>

¹⁷ ACT Government (2026) *Proposed data centre development, Beard 2 (ESO202600012)*. Canberra: ACT Government. Available at: https://www.planning.act.gov.au/_data/assets/pdf_file/0015/3063102/ESO202600012-Beard-Proposed-Data-Centre-Development-Beard-2.pdf

The ACT Government has indicated that Canberra's 100% renewable electricity target can be maintained despite future data centre growth.¹⁸ To ensure data centres do not impact the security and reliability of the ACT's electricity supply, and to align with the ACT Governments' emissions reductions targets and Australia's climate commitments, the ACT Data Centre Framework must require future data centre developments to provide their own additional renewable energy sources, equivalent at least to their additional electricity consumption, together with appropriate storage and network capacity. Increased demand from data centres should not compromise the ACT's emissions reduction targets. Furthermore, the new renewable energy infrastructure must be required to meet strong biodiversity standards.

Digital Waste and Hazardous Materials

Digital waste is often overlooked in discussions surrounding data centre development, yet its proper management and disposal are imperative. The ACT Waste Management and Resource Recovery Strategy and the Circular Economy Strategy 2023–2030 outline responsibilities for businesses to adopt sustainable waste practices through the waste hierarchy framework: reduce, reuse, recycle, and recover.¹⁹

However, the unique nature of data centres presents challenges that existing circular economy frameworks may not adequately address. Data centres contain a range of hazardous materials, many of which are difficult or impossible to recycle safely and may pose serious health risks if improperly handled or disposed of. In addition to electronic waste, AI data centres may also contribute to contamination from Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS), commonly referred to as “forever chemicals.” This group consists of more than 4,500 synthetic chemicals characterised by extremely strong chemical bonds that resist breakdown in the environment, creating significant long-term environmental and public health challenges.²⁰

A moratorium on data centre development would provide time for the ACT Government to develop laws to properly manage hazardous waste and e-waste. The ACT Government should provide greater transparency regarding how local waste policies will address the long-term environmental implications of AI infrastructure, and the forthcoming ACT Data Centre Framework should include standards for the responsible management, reuse and recycling of e-waste.

¹⁸ ABC News (2026) *Data centres are already humming away in the ACT and there could be more coming*, 23 August. Available at: <https://www.abc.net.au/news/2026-08-23/act-data-centre-policy-already-aligned-with-national-ai-standard/106936530>

¹⁹ ACT Government (2023) *ACT Circular Economy Strategy and Action Plan 2023–2030*. Canberra: ACT Government. Available at: https://www.cityservices.act.gov.au/data/assets/pdf_file/0020/2272331/ACT-Circular-Economy-Strategy-access.pdf

²⁰ <https://www.dcceew.gov.au/about/initiatives/pfas>

Air Pollution

A number of data centres in the ACT rely on diesel-powered backup generators for emergency power or to firm up their electricity supply. These generators can release pollutants such as particulate matter (PM2.5). Whereas emissions from internal combustion engines are assessed and monitored, there is currently no such similar requirement for diesel generators.

The ACT Government should assess and regulate air pollution from data centre operations, including emissions from backup generators and other fossil-fuel-based systems. Assessments should specifically consider PM2.5 and other air pollutants, their cumulative impacts and potential health effects on nearby communities.

Regulations should also cover portable and temporary generators, so that developers cannot exploit exemptions for 'temporary' generation. In Memphis, for example, xAI ran up to 35 gas turbines at its data centre by exploiting a county rule that exempted generators that did not stay in place for more than 364 days.²¹ The ACT Government should cap annual run hours for backup generators and require full approval for both permanent and temporary onsite generation.

Noise Pollution

Noise pollution is another significant environmental concern that is often overlooked during the pre-assessment stage of AI data centre developments. The Australian Acoustical Society has identified that the equipment required to operate and maintain data centres including diesel generators, cooling towers, chillers, pumps and exhaust systems produces continuous and persistent noise.²²

While some may argue that data centres are no different from other industrial developments, data centres differ fundamentally in their operational profile, as they require uninterrupted operation to maintain computing capacity and network reliability. As a result, their cooling, ventilation and mechanical systems operate continuously, creating constant noise emissions throughout the day and night.

HVAC (Heating, Ventilation & Air Conditioning) systems are among the primary sources of this ongoing noise. Studies have reported that noise generated by some data centre equipment can reach up to 96 decibels (dBA), exceeding the recognised occupational exposure threshold of 85 dBA.²³ Where facilities cluster, cumulative noise will rise even further above these levels. Prolonged exposure to elevated noise levels may adversely affect both nearby communities and local wildlife, with potential impacts on health, wellbeing and behaviour.

²¹ <https://www.theguardian.com/technology/2026/jan/15/elon-musk-xai-datacenter-memphis>

²² Energy Matters (n.d.) 'Are data centres really as bad for the environment as people think?', *Energy Matters*. Available at: <https://www.energymatters.com.au/renewable-news/are-data-centres-really-as-bad-for-the-environment-as-people-think/>

²³ Tao, Y. and Gao, P. (2025) 'Global data centre expansion and human health: a call for empirical research', *Eco-Environment & Health*. Advance online publication. Available at: <https://doi.org/10.1016/j.eehl.2025.100157>

The ACT Government must conduct meaningful public engagement throughout the planning process to ensure noise pollution considerations are taken into account. Future data centres must be located sufficiently far away from residential areas to avoid ongoing noise pollution from these 24-hour industrial facilities. The ACT Environment Protection Authority should also enforce noise standards at data centre site boundaries. Finally, further Government-funded research is needed to better understand the long-term impacts of AI data centre noise on the ACT environment and local species.

Social and economic considerations

There are significant social and economic challenges with the development and use of data centres and AI technology itself that are major causes for concern.

The ACT Government should consider whether it is willing to support companies that develop AI technologies associated with harms such as:

- Fake news, misinformation and the creation of deepfakes
- Eroding trust in public institutions, social unrest and polarisation
- Bias and discrimination
- Privacy, intellectual property rights and copyright issues, particularly for creatives
- Use of AI in autonomous weapons, war, and conflict
- Job losses and economic instability

At the Commonwealth level, the Senate Standing Committee on Environment and Communications, which includes ACT Senator David Pocock, has recently conducted an inquiry into artificial intelligence and data centres, examining the broader economic and policy implications of the rapid expansion of the industry.²⁴

A key economic issue examined by the Committee is whether existing taxation arrangements can ensure that large technology companies make a fair contribution to the Australian economy, and whether potential gaps in the tax system could allow multinational companies to minimise their tax obligations. These concerns are particularly relevant given Australia's previous experience with multinational resource companies and the challenges associated with ensuring that sufficient economic benefits remain within Australia.²⁵ For the ACT, the question extends beyond taxation to whether local communities will receive any benefit or return from providing land, infrastructure and other resources to support large international AI and data-centre companies. A fair taxation framework could help ensure that a greater proportion of the

²⁴ Parliament of Australia (2026) *Inquiry into artificial intelligence and data centres* [Senate Standing Committee on Environment and Communications]. Available at: https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Aldatacentres48P

²⁵ Pocock, D. (2026) 'If Australian datacentres are going to power the AI revolution, we deserve a fair return', *The Guardian*, 9 June. Available at: <https://www.theguardian.com/commentisfree/2026/jun/09/australia-datacentres-artificial-intelligence-ai-revolution-industry-fairness>

economic benefits generated by the industry is reinvested in public priorities, including healthcare, housing, infrastructure and targeted cost-of-living support.

In 2024, the Senate Select Inquiry on Adopting Artificial Intelligence²⁶ examined the broader impacts of adopting artificial intelligence. The Finance Sector Union of Australia commented that ‘impacts of AI may be disproportionately felt by people with particular education and experience levels, who may find it more difficult to obtain other employment.’²⁷ There is also a risk that these impacts will be felt more by people of lower socioeconomic groups, worsening inequality.’ Broader social impacts outlined in the inquiry also include decline in social trust as a result of AI generated misinformation, and the significant risk of eroding trust in public institutions. The Managing Director of the International Monetary Fund warned that AI is hitting labour markets like a “slow-moving tsunami”, with about 40% of jobs eventually augmented, downgraded or eliminated.²⁸

Further resources

This paper presents a starting point for the ACT Government and Canberra community to consider some of the impacts of data centre development and AI use more broadly in our region. For further resources and information, we recommend:

- The Commons Social Change Library: [How to Stop a Data Centre in Australia](#)
- Greenpeace: [Energy Vampires: The Data Centres Draining Australia Report](#)
- [Pause AI Australia](#)
- The Climate Council: [Clouded Future: Managing the risks of the data centre boom](#)
- Water Services Association of Australia: [Data Centres and Water in Australia: A resource for sustainable data centre development](#)
- Joint Statement from Australian environment organisations: [Public Interest Principles for Data Centres](#)

Conclusion

The Conservation Council is calling for a moratorium on future data centre development in the ACT, until a strong regulatory framework is legislated to avoid and mitigate potential harm to our community and the environment. A precautionary and transparent approach to potential future data centre development is needed to protect the values that make Canberra a sustainable and liveable city. The ACT Government can and must be a national leader on implementing strong guardrails to mitigate the risks of data centre developments in the ACT Region. The Conservation Council stands ready to work with government and industry to ensure that new data centre developments are in Canberrans’ interests.

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https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Adopting_Artificial_Intelligence_AI

²⁷ https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Adopting_Artificial_Intelligence_AI

²⁸ [cnbcm.com/2026/10/12/imf-world-bank-ai-jobs-inflation-.html](https://www.cnbcm.com/2026/10/12/imf-world-bank-ai-jobs-inflation-.html), 2026-10-12.