Published June 2022. This document shares information we have as of the publication date, and it includes estimated information and projections. The information is provided as-is and may change without notice.

Microsoft datacenters in Australia

As more people and businesses rely upon technology to stay connected, informed, and productive, digital needs in Australia and around the globe are growing. And that means the need for hyperscale datacenters is growing too.

Hyperscale brings hyper efficiency. Microsoft cloud services offer customers an energy efficient and carbon neutral alternative to running their own private datacenters. Research shows that Microsoft cloud services are up to 93 percent more energy efficient than traditional enterprise datacenters.

Microsoft strives to empower the communities where our employees live, work, and operate our datacenters. With that, it's important we share information to ensure you understand why datacenters are needed, Microsoft's approach for responsible operations, and the benefits of hosting a datacenter in your community.

The cloud powers our digital world

Cloud computing is the delivery of computing services over the internet. Common daily activities are made possible through cloud computing, such as:


Email


Online banking


File storage


Streaming videos


Collaboration


Online shopping


Mobile apps

Cloud computing can provide consumers and businesses with the benefits of enhanced security, privacy, compliance protection, lower costs, easier access, higher reliability, and a lower carbon footprint.

The Microsoft Cloud is for everyone

The Microsoft Cloud serves over 1 billion customers and 20 million companies worldwide.

Organizations in Australia relying on the Microsoft Cloud are made up of a variety of sectors, such as large enterprises, startups, governments, hospitals, banks, schools, or other organizations that contribute to a modern society.

Government of South Australia

Metro South Health | Queensland Government

CITY OF MARION

doctor care anywhere.

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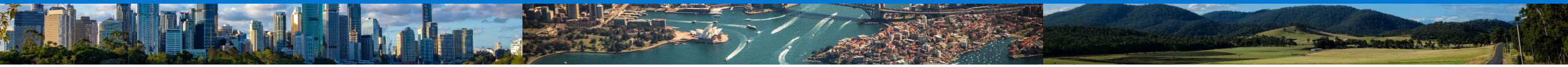
When Microsoft joins a community, we bring our commitments for a better world

Support inclusive economic opportunity

Commit to a sustainable future

Earn trust



Microsoft datacenters are key to our sustainability goals

Carbon negative by 2030

For our datacenters in this region, Microsoft is procuring approximately **35 percent renewable energy** from wind, solar, and hydro resources and are working on procuring additional renewable energy in this area.

Power usage effectiveness (PUE) measures cloud energy efficiency. The calculation is total power consumption divided by IT power consumption. A lower PUE score indicates more energy-efficient datacenters, with a PUE of 1.0 being the best score. New Australian datacenters are under construction and not in operation. They will have a **design average PUE of 1.12**.

Globally, Microsoft datacenters use fossil fuel generators for backup power and account for **less than 1 percent of our overall emissions**. In specific regions, Microsoft is **piloting running backup generators with renewable blend, cleaner-burning fuels**, and is also **piloting the replacement of datacenter generators with long-duration batteries**.

Leadership in Energy and Environmental Design (LEED) is the world's largest green building certification program. LEED provides the framework for healthy, highly efficient, and cost-saving green buildings with lower carbon emissions. LEED certification is a globally recognized symbol of sustainability achievement and leadership. **New Microsoft datacenters being built are designed to earn LEED Gold certification**.

Microsoft operations in Australia **comply with applicable air quality requirements**.

Water positive by 2030

Water usage effectiveness (WUE) is another key metric relating to the efficient and sustainable operations of our datacenters and is a crucial aspect as we work towards our commitment to be water positive by 2030. WUE is calculated by dividing the number of liters of water used for humidification and cooling by the total annual amount of power (measured in kWh) needed to operate our datacenter IT equipment.

Microsoft will use outdoor air with direct evaporative cooling at the new Australian datacenters. This method of cooling **uses outside air and zero water** for cooling when temperatures are below 29.4 degrees Celsius, reducing water for cooling to less than 2 percent of the year. This system is highly efficient, using less electricity and a fraction of water used by other water-based cooling systems, such as cooling towers.

The new datacenter facility in Australia was designed for an **average WUE of 0.012 L/kWh**.

Zero waste by 2030

Microsoft has a goal to achieve 90 percent diversion of datacenter operational waste by 2030. To reach this goal, we're working closely with our waste haulers to optimize waste diversion programs across our global datacenter portfolio. We have achieved Zero Waste certifications for our San Antonio, Texas; Quincy, Washington; Boydton, Virginia; and Dublin, Ireland datacenter locations.

In 2020, we opened our **first Microsoft Circular Center in our North Holland datacenters**, which is designed to extend the life cycle of servers through reuse and to support a circular economy for the Microsoft Cloud. Because it takes five to six years from when a datacenter is operational to generate reusable assets, we are planning an Australia Circular Center to open once the new datacenters are in use and servers are ready to be decommissioned. Microsoft Circular Centers are able to process 3,000 servers per month for reuse.

Globally, Microsoft datacenters reuse **78 percent of our end-of-life assets and components; the remaining 22 percent of materials are recycled**. Additionally, Microsoft is conducting research and development to improve waste diversion by determining new recycling solutions for used air filters and fiber optic cables.

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Microsoft is investing to build digital skills in Australia

fitted for work

Creating economic opportunities with She Work: Working together with Fitted for Work, Microsoft is providing funding for the She Works program to help women join the technology workforce through upskilling and preparedness for technical and tech-enabled roles. Digital skill building and learning paths will cover a broad range of skills, from entry-level digital literacy to advanced product-based education for technical roles. This learning content has been made freely available through a collaboration between Microsoft and LinkedIn.

FarmBeats for Students

Planting big ideas in young minds with FarmBeats for Students: Digital Agriculture will be critical to meet the needs of a global population estimated to top 9 billion people by 2050, to address critical sustainability challenges. With funding from Microsoft, CSIRO piloted Australia's first Microsoft FarmBeats for Students initiative. This initiative allowed young students the opportunity to participate in a hands-on AI sustainable learning experience applying smart farming techniques to food production, which delivered important learning outcomes and digital skills.

Microsoft datacenters create family-wage operations and construction jobs as well as positive impacts to the local economy

Microsoft datacenters represent a capital-intensive investment and long-term commitment to the community. We estimate it will require **4,575 construction roles and 18.6 million work hours** to build the new datacenters in Australia. We intend to fill **25 to 30 percent of positions with local contractors**.

Once fully operational, we anticipate **300 full-time employees will work at the new datacenters**.

Construction jobs

- Electricians
- Plumbers and pipefitters
- Carpenters
- Structural iron and steel workers
- Concrete workers
- Earth movers

Datacenter operations

- Campus management
- People management
- Critical environment operations
- Learning and development
- IT operations
- Mechanical engineers
- Electrical engineers
- Security contractors
- Building maintenance