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 Wyoming

As more people and businesses rely upon technology to stay connected, informed, and productive, digital needs in Wyoming 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 across the West Central region 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.

Albertsons Companies

IDAHO TRANSPORTATION DEPARTMENT

ALTERRA MOUNTAIN COMPANY

CHIPOTLE MEXICAN GRILL

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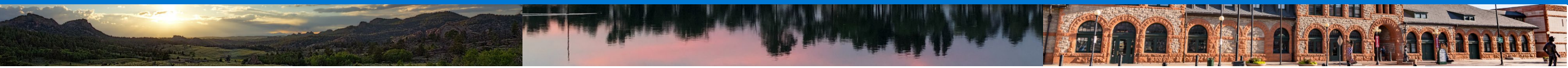
When Microsoft joins a community, we bring our commitments for a better world

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 **55 percent renewable energy** from solar, wind, and hydro resources.

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. During 2021, the Cheyenne datacenter facility had a 12-month weighted average PUE of 1.117. **The new datacenters being built will have a 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, including the planned new datacenters in Cheyenne, are designed to earn LEED Gold certification.**

Microsoft operations in Wyoming **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 uses outdoor air with direct evaporative cooling at our Cheyenne 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 5 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.

For our datacenters in Wyoming, the effective WUE rate for 2021 was 0.25 L/kWh. The new datacenter was designed for an **average WUE of 0.03**.

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. In 2021, our Cheyenne datacenter **diverted 94.3 percent of datacenter operational waste from landfills and incineration**. 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. Wyoming datacenters use the closest available Microsoft Circular Center for decommissioned servers. Circular Centers are able to process from 3,000 to 12,000 servers a month based on capacity.

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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Since 2018, Microsoft has invested $879,000 to support community-identified priorities across 28 partners in Cheyenne

Supporting community connectivity: In partnership with COMEA Homeless Shelter, Microsoft provided funding, operational support, and free Wi-Fi to people experiencing homelessness. This program empowers individuals to apply for jobs, obtain benefits, and receive training and education using the internet.

Helping to protect Crow Creek: Microsoft collaborated with Rotary Club and Frog Creek Partners, a gBETA graduate start-up, to provide funding for 63 gutter bins to be installed throughout Cheyenne. This stormwater filtration system is designed to capture and prevent 12,000 pounds of sediment and trash from entering Crow Creek and the local watershed.

Cybersecurity skill building and Microsoft Datacenter Academy Program: Microsoft partnered with local high school ROTC programs and the US Air Force to train students with cybersecurity skills, provide industry guest speakers, and encourage participation in a national USAF cyber competition. Additionally, 63 students and scholars participated in the Microsoft Datacenter Academy in Cheyenne in the 2022 school year. Students received training in in-demand IT certification courses while gaining hands-on experience with decommissioned Microsoft datacenter equipment.

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. Microsoft datacenter campuses in Wyoming currently employ about 200 employees and vendors in the region. Construction of our first datacenter facility in 2018 required more than 2.3 million work hours in total across an estimated 205 jobs annually.

We estimate it will take more than 700 positions during peak construction and approximately **2.6 million work hours** to complete construction of the new datacenters.

Once fully operational, we anticipate an additional 400 full-time employees will work at those facilities.

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