

VIRGINIA, USA

Microsoft commitments

CARBON

Microsoft pledged to become carbon negative by 2030 and remove historical carbon since its 1975 founding by 2050. Microsoft will reduce Scope 1 and 2 emissions to near zero through energy efficiency work and by reaching **100 percent renewable energy supply by 2025.**

Microsoft has also committed by 2030 to:

- Be free of diesel
- Match 100 percent of electricity consumption, 100 percent of the time, with zero-carbon energy purchases
- Reduce our Scope 3 emissions by more than half

WATER

In 2020, Microsoft pledged to be water positive for our direct operations by 2030.

Through this commitment, we will replenish the water consumed by datacenter operations in water-stressed regions. We have also committed to **reduce water waste by 95 percent in our datacenter operations by 2024.**

WASTE

In 2020, Microsoft announced enhanced goals for waste reduction, circular supply chains, and zero-waste certification. We are working towards our goal of **90 percent reuse of servers and components by 2025** through our first-of-a-kind Microsoft Circular Centers.

Microsoft is using **circular economy** principles in our datacenters by implementing reuse and comprehensive recycling programs.

By 2030, Microsoft datacenters will be zero waste



ECOSYSTEMS

Microsoft has committed to **protecting more land than we use for direct operations by 2025.**

Microsoft is committed to community investment, pollution remediation, and fair economic inclusion initiatives, as well as investment in clean energy, broadband access, and water replenishment initiatives.

Virginia, USA

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

The Microsoft Cloud offers customers an energy-efficient and carbon-neutral alternative to running their own private datacenters. [Research](#) shows that Microsoft Cloud services can be up to 93 percent more energy efficient than traditional enterprise datacenters.

We're committed to providing a sustainable Microsoft Cloud, so we wanted to share information about how we take responsibility for our datacenter operations.

For Microsoft datacenters located in Virginia, in the East US and East US 2 regions, we have included local sustainability investments and datapoints in support of meeting and exceeding our commitments around carbon, water, waste, and ecosystems.

Published March 2023. 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.

Local sustainability investments

CARBON

1.144

Power usage effectiveness (PUE)

January 2022 – December 2022
Design PUE for new datacenters 1.12



70%

Renewable energy coverage from wind, solar, and hydro power

Approximate energy procured through June 2022

In Virginia, we are transitioning from petroleum-based diesel to power our backup generators to a **renewable biofuel blend that reduces net carbon emissions.**

The **majority of Boydton, Virginia, datacenters are LEED Gold certified.** Moving forward, new Microsoft datacenters are designed to earn LEED Gold certification.

WATER

0.17 $\frac{\text{L}}{\text{kWh}}$

Water usage effectiveness (WUE)

January 2022 – December 2022

Microsoft uses **outdoor air with direct evaporative cooling** at our Boydton 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 15 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.

[Learn about PUE and WUE](#)

WASTE

Microsoft Circular Centers can process up to

12,000

servers per month for reuse.

In January 2021, we opened a **Microsoft Circular Center at the Boydton datacenter facilities.**

Microsoft datacenters in Virginia and other locations renewed **zero-waste certification through the UL's Zero Waste to Landfill program.**

Globally, Microsoft datacenters reuse 78 percent of our end-of-life assets and components; the remaining 22 percent of materials are recycled.

COMMUNITY

Since 2016, Microsoft has donated more than

\$2.8M

across 91 projects, supporting community-identified priorities in the Virginia counties of Mecklenburg, Halifax, Charlotte, Lunenburg, Brunswick, and Loudoun.

[Learn more](#)

Achieving your sustainability goals

Microsoft Azure enables operational agility, performance, efficiency, and sustainability so you can reduce your company's water usage, waste output, and carbon footprint—all while improving productivity and cost efficiency.

Microsoft Emissions Impact Dashboard

The Microsoft Emissions Impact Dashboard helps to quantify the impact of Microsoft Cloud services on your environmental footprint, factoring in Microsoft's Scope 1, 2, and 3 emissions as well as the efficiency of your on-premises environments.

Microsoft Cloud for Sustainability

The Microsoft Cloud for Sustainability allows you to more easily and effectively record, report, and reduce your emissions on a path to net zero. It integrates previously disparate solutions into a new system of record that delivers all the data you need to manage your business today while you transform.

[Learn more](#)

Whatever your sustainability goals, Microsoft can help you plan, implement, and attain measurable environmental and cost benefits.

Learn more about improving your sustainability with Microsoft:

Microsoft.com/Sustainability