

# Microsoft datacenters in Virginia

## Datacenters provide the physical infrastructure for the technology we depend on at work and in our personal lives

### A datacenter building houses thousands of computer servers and data storage devices connected to the internet



These buildings are similar in size and appearance to a distribution warehouse.



Microsoft aims to build datacenters that are best in class in performance, reliability, safety, aesthetics, and sustainability.



Compared to many other industrial facilities, datacenters do not create significant noise pollution or have a significant impact on traffic flow or congestion.



Microsoft operates more than 300 datacenters in over 34 countries.

### Datacenters are part of everyday life

Whenever you open an app on your phone, join a virtual classroom or meeting, snap and save photos, or play a game with your friends online, you are using a datacenter.



Email



Online shopping



Mobile apps



Online banking



File storage



Streaming videos

[Take a virtual tour of a datacenter](#)



# Microsoft datacenters create local operations and construction jobs

Microsoft datacenters in Virginia currently employ **792 people**.

Since 2014, more than **11.3 million hours** have been worked on construction projects, with an average of **500 construction jobs per year**. We estimate it will require **2,450 annual construction roles** and approximately **15.4 million work hours** to complete construction for the new datacenters being built in Northern and Southern Virginia.

By the end of 2026, we project **1,475 full-time employees and contractors** will work across all operational facilities.

## Datacenter operations

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

## Construction jobs

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

[Find Microsoft jobs in your community](#) >

## Taxes from Microsoft datacenter operations represent important revenue for national, regional, and local governments

Microsoft datacenters represent a capital-intensive investment and long-term commitment to the community. This investment grows the commercial property tax base, increasing revenue for municipal services that benefit local citizens.

Examples of country, provincial, and local taxes that support cities, municipal services, schools, and colleges include:



### Property taxes

Collected annually once land is purchased.



### Indirect taxes

From construction and operation expenses. Examples include VAT, GST, and sales tax.



### Income taxes

From construction and operations workers.

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# Microsoft has invested Virginia local priorities since 2016

Microsoft community investments support community-identified priorities across **91 projects** in the counties of Mecklenburg, Halifax, Charlotte, Lunenburg, Brunswick, and Loudoun.

## Investing in people of all ages through local skill-building programs

### Providing pathways for datacenter careers

In collaboration with SVHEC and SVCC in southern Virginia and the Loudoun Freedom Center in northern Virginia, Microsoft facilitates workforce training through its flagship Datacenter Academy program. The program helps prepare students for careers in IT, including work in datacenters. Servers and other IT equipment were donated to the schools to build labs that emulate a working datacenter. Through this program, 195 participants completed training through the DCA student and scholarship learning pathways in 2022.

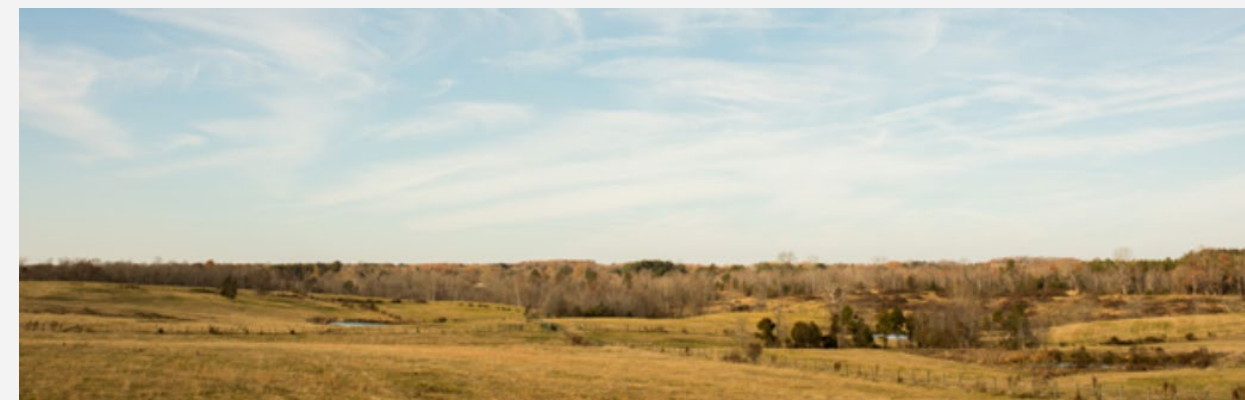
[Learn more about the Datacenter Academy >](#)



## Partnering with environmental sustainability programs for local impact

### Restoring native habitat as a community space

Microsoft is designating over 230 acres of rural landscape in Virginia for restoration and conservation. The Chase City Conservancy Project will restore wetlands, streams, and native pollinator habitats and conserve forest and grasslands on a large plot of land Microsoft has purchased for a new datacenter facility south of Chase City, Virginia.



[Learn more about the Chase City Conservancy Project >](#)

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# Microsoft global commitments

## CARBON

**Microsoft pledged to become carbon negative by 2030 and to 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 coverage 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 and recycle 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

## Datacenter operations sustainability investments

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 we have included local sustainability investments and datapoints in support of meeting and exceeding our commitments around carbon, water, waste, and ecosystems.

### CARBON

# 1.144

Power usage effectiveness (PUE)

January 2022 – December 2022  
Design PUE for new datacenters 1.12

We've committed to have **100% renewable energy coverage globally by 2025**

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.

[Learn about PUE >](#)

### 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 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.

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