

# South Korea

## Sustainability fact sheet

As more people and businesses rely upon technology to stay connected, informed, and productive, digital needs in Korea 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's datacenters in the Korea Central region, located in Seoul, Korea, we have included local sustainability investments and datapoints in support of meeting and exceeding our commitments around carbon, water, waste, and ecosystems.

Published September 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.

**CO<sup>2</sup>** Carbon  
Design power usage effectiveness (PUE) for new datacenters

# 1.12

Not yet in operation

### Microsoft's commitment

Microsoft pledged to become carbon negative by

# 2030

And by 2050, removing historical carbon since its founding in 1975

## 11% renewable energy coverage

approximate energy procured through June 2021



Microsoft will reduce Scope 1 and 2 emissions to near zero through energy efficiency work and by reaching

## 100% renewable energy supply by 2025.

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

New Microsoft datacenters are designed to earn **LEED Gold certification.**

Microsoft has also committed by **2030** to be:

**Diesel free**

**100% of electricity consumption, 100% of the time, matched by zero carbon energy purchases**

**Reducing our Scope 3 emissions by more than half**

[Learn about PUE and WUE](#)



### Water

Water usage effectiveness (WUE)

# 0.34 $\frac{L}{kWh}$

January 2021 – December 2021



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 in our datacenter operations by 95% by 2024.

## 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.

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](https://Microsoft.com/Sustainability)

[Azure.Microsoft.com/Sustainability](https://Azure.Microsoft.com/Sustainability)



Microsoft uses outdoor air with direct evaporative cooling at our South Korean datacenters.

This method of cooling uses **outside air and zero water** when temperatures are below 29.4 degrees Celsius, **reducing cooling water use to less than 10 percent of the year.**

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

**By 2030,**

**all Microsoft-owned datacenters will be zero-waste.**

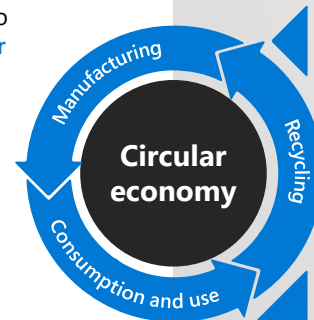


### Waste

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

Microsoft Circular Centers are able to process **3,000 servers per month for reuse.**

It takes 5-6 years from when a datacenter is operational to generate reusable assets. Once servers are ready to be decommissioned in this region, Microsoft is planning to open a **Circular Center in Korea.**



### Resources

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

### Waste



### Community

In South Korea, Microsoft is invested in helping people gain the skills for in-demand roles within the digital economy.

#### Youth@Data

In partnership with the South Korean Ministry of Interior and Safety, Microsoft sponsored the Youth@Data program which provided two weeks of data analysis education to 5,000 participants in 2021. Participants are trained in unstructured and machine learning-based data analysis.

[Learn more](#)

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.**