

Microsoft datacenters in Ireland

As more people and businesses rely upon technology to stay connected, informed, and productive, digital needs in Ireland 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 the cloud:



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

Microsoft's cloud serves over 1 billion customers and 20 million+ companies worldwide

Organizations in Ireland 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.



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 **49 percent renewable energy** from wind resources. We have a power purchase agreement with Ronaver for the Tullahennel wind project.

[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. Our Ireland datacenters had a 12-month weighted average PUE of 1.22 for 2021. The new datacenters that commenced design in January 2021 will have a **design PUE of 1.12**.

[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. The majority of Microsoft Ireland datacenters either have been or are in the process of being LEED Gold certified and **new Microsoft datacenters being built are designed to earn LEED Gold certification**.

Dublin datacenters are also [ISO50001 certified](#), further demonstrating our commitment to continuous energy efficiency management.

Microsoft operations in Ireland **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 most of our Ireland 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.

For our datacenters in Ireland, the WUE during 2021 was 0.03 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. In January 2022, we opened a Circular Center at the Dublin datacenter facilities. 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.

This work builds on our ongoing waste reduction efforts that started in 2008 and resulted in the zero waste certifications of our Dublin datacenters.

Since 2018, Microsoft has donated more than €1.8 million across 29 Greater Dublin area organizations supporting community-identified priorities



Microsoft partnered with [SSE Airtricity](#), to install solar panels on 27 schools and hospitals for Ireland's first distributed power purchase agreement. The panels are expected to abate more than 2.1 million kilograms of carbon emissions over 15 years. Additionally, the schools are providing hands-on learning with renewable energy by having students help install the solar panels and batteries with a retrofit lighting system.



Collinstown Park Community College

Collaborating with **Collinstown Park Community College**, Microsoft is facilitating workforce training to prepare students for careers in IT, including work in datacenters. Servers and other IT equipment were donated to build a lab that simulates a working datacenter.



Microsoft is supporting **StepIn2Tech**, a digital skills training program developed by Microsoft Ireland in partnership with FIT, that will equip 10,000 people with the digital skills required to transfer to emerging and in-demand roles within the digital economy.

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. More than **300 full-time employees** and 350 contractors work across the Microsoft datacenter campuses in Ireland.

Since 2016, more than **7.3 million hours** have been worked on construction projects, with an average of **528 construction jobs per year**. We anticipate it will take **4.16 million hours** across an estimated **1,000 annual construction jobs** to complete the new datacenter facilities.

Once fully operational, we anticipate an additional 300 full-time employees will work at the new facility.



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