Microsoft

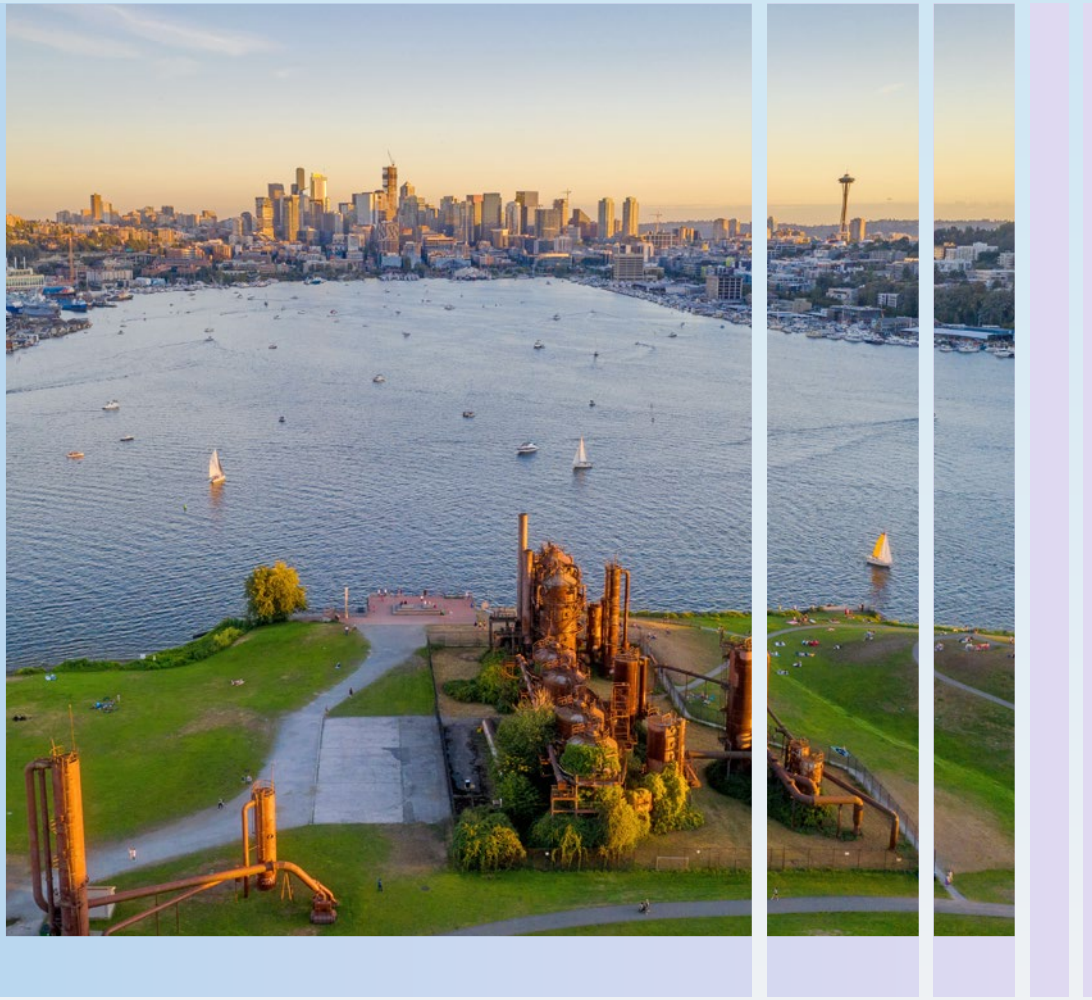
2026 Environmental Sustainability Report

Responsibly building the AI future

Reporting on our 2025 fiscal year

In this report

This report presents Microsoft's environmental sustainability performance during FY25. It provides an overview of our strategy, progress, and key initiatives across our infrastructure and products, along with the context shaping our work. More detailed environmental data, methodologies, and performance metrics are available in our Environmental Data Fact Sheet. We publish both as part of our commitment to transparency, accountability, and shared learning.



Explore more

Accelerating Sustainability | Microsoft

Overview

Foreword	4
Our approach	8

Infrastructure

Introduction	13
Datacenters	14
Scaling energy solutions	28
Advancing carbon dioxide removal	32
Campuses	35
Investing where we live and work	39
Looking ahead	41

Products

Introduction	43
Software and platforms	44
Devices	48
XBOX	51
Logistics and supply chain	53
Applying AI for sustainability	56
Looking ahead	60

Appendix

2025 progress at a glance	62
How we report	63
Endnotes	64

Reporting disclosure

A key principle of our work is transparency. This report, published annually, includes our strategy, progress against our goals, and key challenges and trends we see in this work. We also publish our environmental data, which is included in the separate Environmental Data Fact Sheet. Deloitte & Touche LLP performed a review relating to specified information within Section 1 of the Environmental Data Fact Sheet. Read about how we report in Appendix A.

Overview

In this section

Foreword 4

Our approach 8

Foreword

Responsibly building the AI future

As we enter a new era for AI, Microsoft's environmental sustainability work is entering a new phase—defined not only by ambition, but by how we deliver in a period of rapid technological change. In our pursuit of becoming a carbon negative, water positive, and zero waste company that protects ecosystems, the context has evolved, and so must our approach.

The global shift toward AI is reshaping economies, accelerating innovation, and becoming foundational to how technology is built and used. It is also increasing demand for the energy, water, land, and materials required to support that growth. As a company at the forefront of this transition, Microsoft has a responsibility to help ensure that technology strengthens, rather than strains, the systems and communities on which it depends.

This imperative is reshaping the context for our work.

We are approaching this moment with clarity and conviction. We believe AI can deliver broad societal, economic, and environmental benefits, but innovation at this scale must be matched by responsibility at the same scale. For Microsoft, this means designing, building, and operating infrastructure that is more efficient, more resilient, and more grounded in the realities of the communities where we operate.

We do not see these dynamics as a reason to step back. We see them as a mandate to lead differently. That requires greater operational rigor, stronger integration across our sustainability priorities, and a sharper focus on durable outcomes for the local communities where we work and the global value chains that make our work possible. It also requires being transparent about where progress is advancing, where it is more difficult, and where new approaches are needed.

Foreword continued

The path forward will not be defined by simple tradeoffs or single solutions. It will depend on how effectively we align innovation with stewardship. The systems we build to support the future must also support the long-term health of the planet and the communities we serve. Our experience makes clear that this is possible, but only with even greater discipline, partnership, and a willingness to learn and adapt as conditions evolve.

What this moment requires

Our aim is to build technology that gives more than it takes. Long-term progress depends on how we build it and whether growth strengthens the places where it takes root.

This thinking is reflected in our Community-First AI Infrastructure approach, which is helping shape a more integrated model for community partnership, responsible operations, and environmental performance as we grow. In this way, sustainability is not separate from growth; it is part of how responsible growth is defined.

While AI infrastructure is driving demand for energy, water, land, and materials, sustainability solutions are not scaling fast enough to meet demand. This tension is real, and it is also productive.

It is forcing sharper questions: Where do we need to move faster, invest differently, or rethink our approach? Which assumptions still hold, which ones need to evolve? Five years into this work, we have more operational data, more direct experience, and a clearer view of what measurable planetary progress actually requires. That perspective helps keep us focused on outcomes rather than attached to any single pathway.

We want to be clear about what this means—and what it does not. It means being more precise about what sustainability requires for Microsoft, and more willing to refine our strategies as conditions change, data improves, and tradeoffs become clearer. It does not mean we are lowering our ambition.

> Today, accountability depends not only on setting ambitious goals, but on improving how we deliver against them.

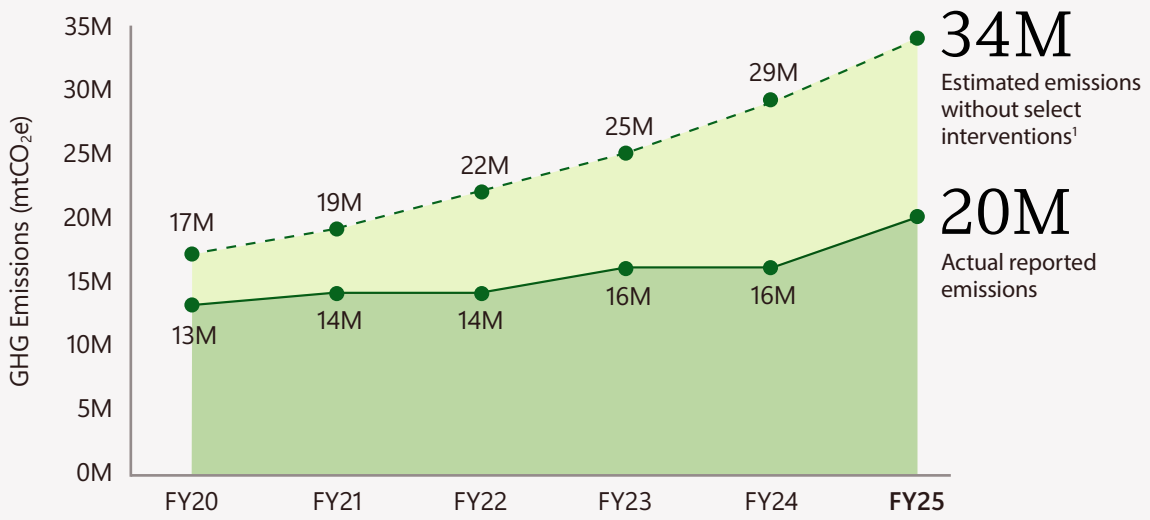
Foreword continued

Progress amid growth

Our results reflect both progress and pressure. As we scale the physical infrastructure required to power the AI economy, our emissions are shaped by the impact of that growth and the actions we are taking to manage it.

The visual that follows illustrates this dynamic by comparing our reported emissions with a modeled view of where emissions may have been in the absence of four specific interventions: carbon-free electricity, sustainable fuels, XBOX console efficiency, and Surface device decarbonization. While these examples represent only a portion of our emissions reduction efforts, they highlight an important lesson from our work to date: that well-designed, targeted interventions can deliver measurable progress even as demand for infrastructure continues to rise.

In FY25, we matched 100% of our annual global electricity consumption with renewable energy.[2] Microsoft will continue to push for an expansive focus on adding all forms of carbon-free electricity (CFE)[3] to the grids where we operate, complementing and building on our portfolio of renewable energy resources. We recognize that the world's rising electricity needs require a balanced, all-of-the-above decarbonization strategy to meet global economic growth and environmental goals, and we will continue to support this approach moving forward.



Our total emissions (Scopes 1, 2, and 3) increased 25% year over year, driven primarily by the expansion of our datacenter infrastructure and pausing our use of non-additional, unbundled renewable energy certificates as we prioritize investments that bring net new power to grids. While this decision increases our reported emissions in the near term, it enables us to increase the development of new CFE rather than relying on certificates alone. We believe this change will create more long-term sustainability benefits. Growth-related emissions pressure was expected. The more important signal is where that pressure is concentrated.

Scope 3 remains the largest share of our footprint overall, but one of the clearest changes this year was the growing contribution of Scope 2, which represents 13% of our total emissions—up from nearly 2% last year. This development highlights how important the energy systems across our supply chain are in shaping environmental outcomes.

In FY25, we matched 100% of our annual global electricity consumption with renewable energy.

0.07%

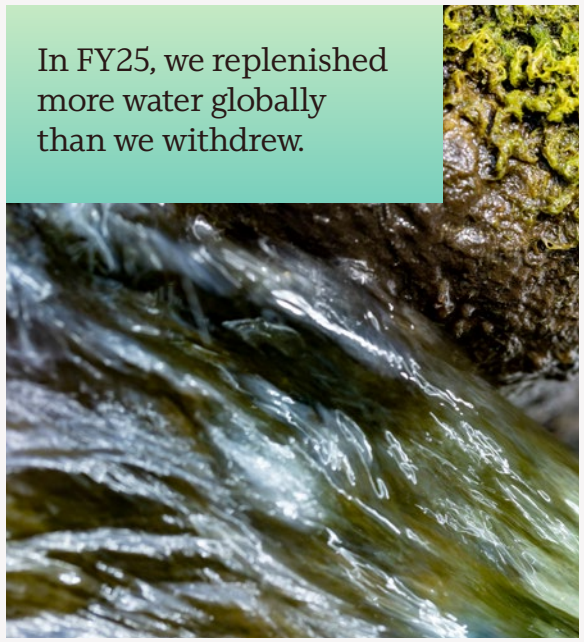
Reduced single-use plastics in primary packaging to 0.07% across our global portfolio.[4]

Foreword continued

This year's results also made clear that progress now depends on adapting how we work.

Water is one of the clearest examples. In FY25, we replenished for the first time more water globally than we withdrew—more than 14 million cubic meters—marking a major milestone on our journey to become water positive. Reaching this point reflects years of work to improve water efficiency, expand replenishment efforts, and scale partnerships around the world.

In FY25, we replenished more water globally than we withdrew.



We are proud of this achievement but also know that replenishing global volumes is not enough. The next phase of our work is increasingly local. As we move forward, we are placing greater focus on helping restore more water to the watersheds where we operate than we withdraw while strengthening long-term water resilience. We prioritize projects in water-stressed regions that are locally relevant and designed in partnership with communities, delivering benefits not only for water availability, but also for ecosystems, economies, and people. Through this approach, we aim to ensure our growth supports and helps sustain the communities and environments where we operate.

Transparency remains central to how we work and how we report. Microsoft has eliminated nearly all single-use plastics in our primary product packaging, reducing the share that remained to just 0.07% at the end of calendar year 2025.[4] But we are not rounding down. We are staying accountable to the work required to eliminate them entirely.

Across our cloud operations, we achieved 92% reuse and recycling of decommissioned servers and components for the second consecutive year, diverted 90.5% of construction and demolition waste from landfills and incinerators, and expanded our Circular Centers to seven facilities globally. These results also reflect a broader shift toward solutions that have co-benefits—reducing both emissions and resource demand over time.

Throughout this journey, we have learned that progress in one area often depends on progress in another. Clean energy investments are essential to decarbonization. Water use is linked not only to our operations, but also to the energy systems that power them. And extending hardware life through circular approaches can reduce both emissions and material demand across the value chain.

That is why our priorities extend beyond tracking progress against individual commitments on water, carbon, waste, and ecosystems as though they move independently. Our experience has made clear that progress does not happen pillar by pillar. Some of the most consequential work ahead will be measured in whether we address system challenges and help build the conditions for long-term progress: more resilient grids, stronger markets for lower-carbon materials, more effective water stewardship, and infrastructure designed and operated with local realities and community priorities in mind.

For that reason, this year's report takes a more integrated approach—placing progress against our commitments in the broader context of how those commitments are operationalized across our infrastructure and products.

What's next

We are proud of what we have accomplished, and we remain humbled by the scale of the challenge ahead.

Responsibly building the AI future requires clear accountability for what AI demands, candor about real constraints and tradeoffs, and sustained focus on outcomes that are durable and broadly shared.

The chapters that follow show how we translate that intent into execution across our physical infrastructure, products, and value chain—where our sustainability commitments become operational reality.

Brad Smith
Vice Chair and President

Melanie Nakagawa
Chief Sustainability Officer

Our approach

Driving meaningful sustainability progress requires choosing the right intervention for the problem at hand. Some challenges are best addressed by reducing demand at the source, while others require helping solutions reach commercial scale. Still others depend on the policies, infrastructure, or local partnerships that make progress possible.

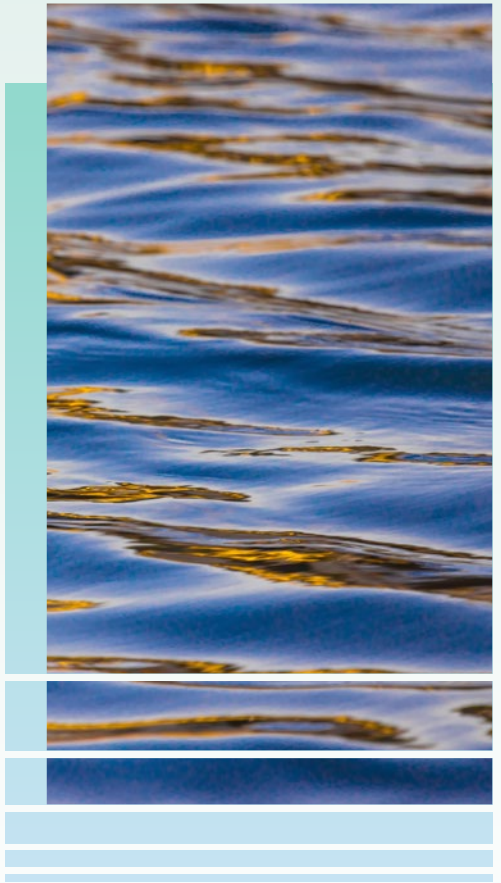
At Microsoft, the path from sustainability ambition to operational execution has relied on applying technology and advancing cross-cutting interventions that support progress toward our commitments while supporting core elements of our business. Four levers are especially important in this phase: improving efficiency, building markets, advancing policy, and forging partnerships. Together, they help us reduce impact within our operations and value chain while also shaping the broader systems that influence sustainability progress.

In 2020, we set ambitious commitments that continue to guide our environmental sustainability strategy. We are working to:

- **Become carbon negative** by 2030 by reducing emissions across our operations and value chain, and removing more carbon than we emit.
- **Become water positive** by 2030 by reducing water use, replenishing more than we withdraw, expanding access to water and sanitation, and supporting stronger water stewardship.
- **Become zero waste** by 2030 by reducing waste at the source, keeping products and materials in use longer, and recovering what remains.
- **Protect ecosystems** by applying data and digital technologies and protecting more land than we use by 2025.

We continue to publish our progress annually as part of our commitment to transparency and shared learning. This year, we are expanding transparency through the addition of metro-level datacenter energy and water use, providing greater insight into how our operations interact with local resources and communities. This effort also supports establishing a deeper understanding of how digital infrastructure interacts with local energy and water systems.

Sharing our approach provides important context for progress: what Microsoft can change directly, what depends on broader system conditions, and where shared action is essential.



Our approach continued

Key levers that advance sustainability progress

Improving efficiency

Across our commitments, efficiency is often the first and most direct action we can take to reduce our impact: using less energy, water, land, and materials from the outset. At Microsoft, that means designing infrastructure, products, and operations to reduce resource demand before it has to be managed, replenished, recycled, or removed.

Improving water efficiency in our datacenters is one way we are addressing resource demand and advancing our water positive goal. We use water usage effectiveness (WUE)[12] to help measure and improve the efficiency of water used for datacenter cooling and humidification. Through continuous innovation—including advanced cooling technologies, increased use of recycled and reclaimed water, and next-generation designs that can eliminate most water use for cooling—we are driving sustained improvements in WUE and, in some cases, working toward near-zero water consumption in our datacenters.

Efficiency also extends across Microsoft products and the value chains that support them. In Windows, energy-saving features can help lower electricity demand during use, while guidance for more efficient workloads in GitHub can help developers reduce the energy required to run software and cloud services. In devices, packaging, and cloud hardware, circular design helps reduce waste and the need for new materials. The less resource-intensive these systems become, the stronger the foundation for every other part of our strategy.

Building markets

Some sustainability solutions are technically possible before they are widely available, affordable, or ready to be adopted. Building markets is about helping close that gap. At Microsoft, that means using investment, procurement, and long-term demand signals to help emerging solutions move from early promise toward broader availability.

In 2020, we launched Microsoft's Climate Innovation Fund, a $1 billion investment mandate designed to help promising sustainability solutions move toward commercial scale. Since then, we have allocated $815 million to a portfolio of 67 investees, who collectively have attracted billions of dollars in follow-on capital for solutions including lower-carbon materials, sustainable aviation fuels, and carbon-free electricity (CFE).[3]

Carbon dioxide removal (CDR) shows how market-building can work in practice. Since 2020, Microsoft has worked to help grow CDR markets by defining criteria for high-quality carbon removal, structuring early commercial contracts, and using procurement to signal long-term demand. In 2025, we added 29 projects to our CDR portfolio, spanning five continents and 10 distinct CDR pathways. We expect these projects to contribute more than 45 million metric tons toward Microsoft's carbon goals over the next three decades. We also structure long-term purchase agreements based on the maturity and scale potential of different CDR pathways—often 10 to 15 years for engineered solutions and more than 20 years for nature-based projects—helping suppliers secure financing, improve revenue certainty, and expand deployment.

The goal is not only to buy the sustainability solutions available today. It is also to help expand the range of solutions available in the future—for Microsoft and for others in the future—at greater scale, with stronger quality standards and clearer pathways for adoption.

Our approach continued

Advancing policy

Policy often determines whether sustainability solutions remain isolated pilots or scale into broader adoption. Many of the conditions that shape that transition sit beyond any single company, including grid capacity and interconnection, permitting and siting processes, sustainability standards and disclosure expectations, climate data transparency, and access to cleaner energy.

Microsoft engages with governments, regulators, utilities, multilateral organizations, and industry groups to help create the conditions that make lower-impact choices more practical, transparent, and widely available.

As electricity demand grows, grid modernization is becoming one of the clearest examples of why policy matters. Expanding access to CFE is not only a question of how much clean power is procured; it also depends on whether energy systems can connect new projects, move electricity across regions, accommodate new sources of demand, and deliver power reliably where it is needed. That requires planning, investment, and regulatory frameworks that can keep pace with the scale of electrification and digital infrastructure growth.

Microsoft supports this work in markets where energy system constraints directly affect our operations, our suppliers, and the pace of decarbonization. In the United States and Europe, that includes engagement on grid modernization, expansion, and digitalization as policymakers consider how to better integrate digital infrastructure into the energy system. In Asia, our work focuses in places where Microsoft has technology hardware suppliers and where decarbonization depends on cleaner, more reliable electricity. Across these regions, priorities include transmission expansion, faster interconnection, greater transparency, and clearer access pathways for CFE.

Across our policy engagement, the common thread is practical: sustainability solutions need more than technical readiness. They need standards that reward better performance, data that supports climate-smart decisions, and policy frameworks that help markets scale. When policy, technical expertise, and infrastructure planning move together, they can help make the systems behind sustainability progress faster to build, easier to evaluate, and more durable over time.

We engage on policy to help create the conditions that make lower-impact choices more practical, transparent, and widely available.

Forging partnerships

Some sustainability challenges are too interconnected for any one organization to address alone. Partnerships help connect Microsoft's commitments to the people, places, and systems that shape lasting progress.

Partnerships help connect Microsoft's commitments to the people, places, and systems that shape lasting progress.

That includes the communities where we build and operate, suppliers across our value chain, customers applying technology to advance their own sustainability goals, and researchers, nonprofits, governments, and industry groups working toward shared solutions.

As AI infrastructure grows, partnership is essential to building in ways that reflect local priorities. Through Microsoft's Community-First AI Infrastructure plan, we work with local jurisdictions, utilities, nonprofits, and community partners to better align datacenter growth with community needs. That includes collaboration on energy and water priorities, local jobs and AI skill-building, and long-term community investments that help ensure infrastructure growth contributes to the places where we operate in ways that are meaningful to the community itself.

Partnerships also help extend Microsoft's sustainability work beyond our own operations. Across our supply chain, we work with suppliers to lower barriers to decarbonization. Through our AI for Good Lab, we partner with researchers, nonprofits, and governments to turn data and technology into practical tools for water resilience, ecosystem conservation, and climate action. In this way, partnerships connect across our sustainability work, connecting what Microsoft can do directly with the broader systems where progress must scale.

Through our AI for Good Lab, we work with research institutes and nonprofits to develop AI tools that enable faster analysis and more targeted interventions. In partnership with Wild Nature Institute, we developed GIRAFFE, an open-source tool to help conservationists track and protect Tanzania's endangered giraffes. Learn more here.

Addressing system challenges

None of these interventions work in isolation. Improving efficiency, building markets, advancing policy, and forging partnerships each address a different part of the same challenge: turning sustainability ambition into practical progress across complex systems.

The chapters that follow show how we're applying these and other interventions across the infrastructure needed to support cloud and AI services and the products and experiences we build.

Infrastructure

In this section

Introduction	13
Datacenters	14
Scaling energy solutions	28
Advancing carbon dioxide removal	32
Campuses	35
Investing where we live and work	39
Looking ahead	41

Infrastructure for the AI future

Most customers know Microsoft for its digital infrastructure—the tools and platforms that support productivity, innovation, and intelligent systems across industries. But behind these tools is a growing network of physical infrastructure: datacenters and campuses, along with the supply chains that connect them and the energy systems that power them.

These systems are where many of our sustainability commitments are put into practice. As we expand capacity, so do the associated impacts: from electricity and water use to materials, transport, end-of-life management, and the emissions associated with all of them. This makes every decision about how we design, build, and operate our physical infrastructure an opportunity to work towards our long-term sustainability goals.

As we continue to advance innovation across Microsoft's physical infrastructure, we know that progress must also extend beyond Microsoft's own operations. As technology infrastructure is closely connected to broader energy and industrial systems, meaningful change depends on collective action to expand access to carbon-free electricity (CFE),[3] strengthen grid resilience, partner with suppliers to reduce value chain emissions, and scale solutions for emissions that remain difficult to abate, including carbon removal. Together, these efforts show how Microsoft is working to build the physical systems enabling innovation in ways that support a more sustainable future.

Datacenters

Every cloud and AI interaction relies on physical infrastructure—the datacenters, servers, networking equipment, and systems that make digital services possible. As AI adoption accelerates, the infrastructure behind it is emerging as one of the defining resource challenges of this decade—and one of the most important opportunities to advance sustainability.

This reality underscores the urgency to manage datacenter growth responsibly, for Microsoft and for the broader technology sector. It also highlights a significant opportunity to improve efficiency, accelerate lower-impact design, and reduce the resources required to deliver the capacity that people and organizations increasingly rely on.

At Microsoft, we are focused on managing the environmental impact of our datacenters across their full lifecycle. This means taking an end-to-end approach:

- **Designing** facilities that use energy, water, and materials more efficiently.
- **Building** them with lower-carbon materials and methods.
- **Operating** them in ways that advance sustainability while enabling growth.

Integrated into this approach is our continued focus on delivering long-term, community-centered outcomes and building infrastructure in ways that strengthen the communities where we live and work.

Datacenters continued

Delivering community-first AI infrastructure

In 2024, Microsoft launched its Datacenter Community Pledge to set expectations for how we design, build, and operate infrastructure in ways that create tangible local benefits. In 2026, we built on that foundation with our Community-First AI Infrastructure plan, which responds more directly to the priorities that communities most often raise as new AI infrastructure grows.

Initially launched in the United States, the plan focuses on four areas where those concerns are often felt most directly:

- **Electricity**—We will work with local jurisdictions so our datacenters do not increase electricity prices for customers.
- **Water**—We will minimize water use and replenish water in priority regions.
- **Skilling**—We will invest in local hiring and workforce development, including AI skills and support for nonprofit organizations.
- **Community investment**—We will contribute to the local tax base and support long-term community investment.

We are beginning to put these priorities into practice through partnerships across energy systems, water resources, workforce development, and investment.

Throughout this chapter, examples from design, construction, operations, water stewardship, and ecosystem work show how these frameworks are taking shape in practice.

Datacenters continued

Advancing datacenter sustainability

At Microsoft, we are focused on managing the environmental impact of our datacenters across their full lifecycle. This means taking an end-to-end approach to help advance sustainability from how we design, to how we build, to how we operate our datacenters.

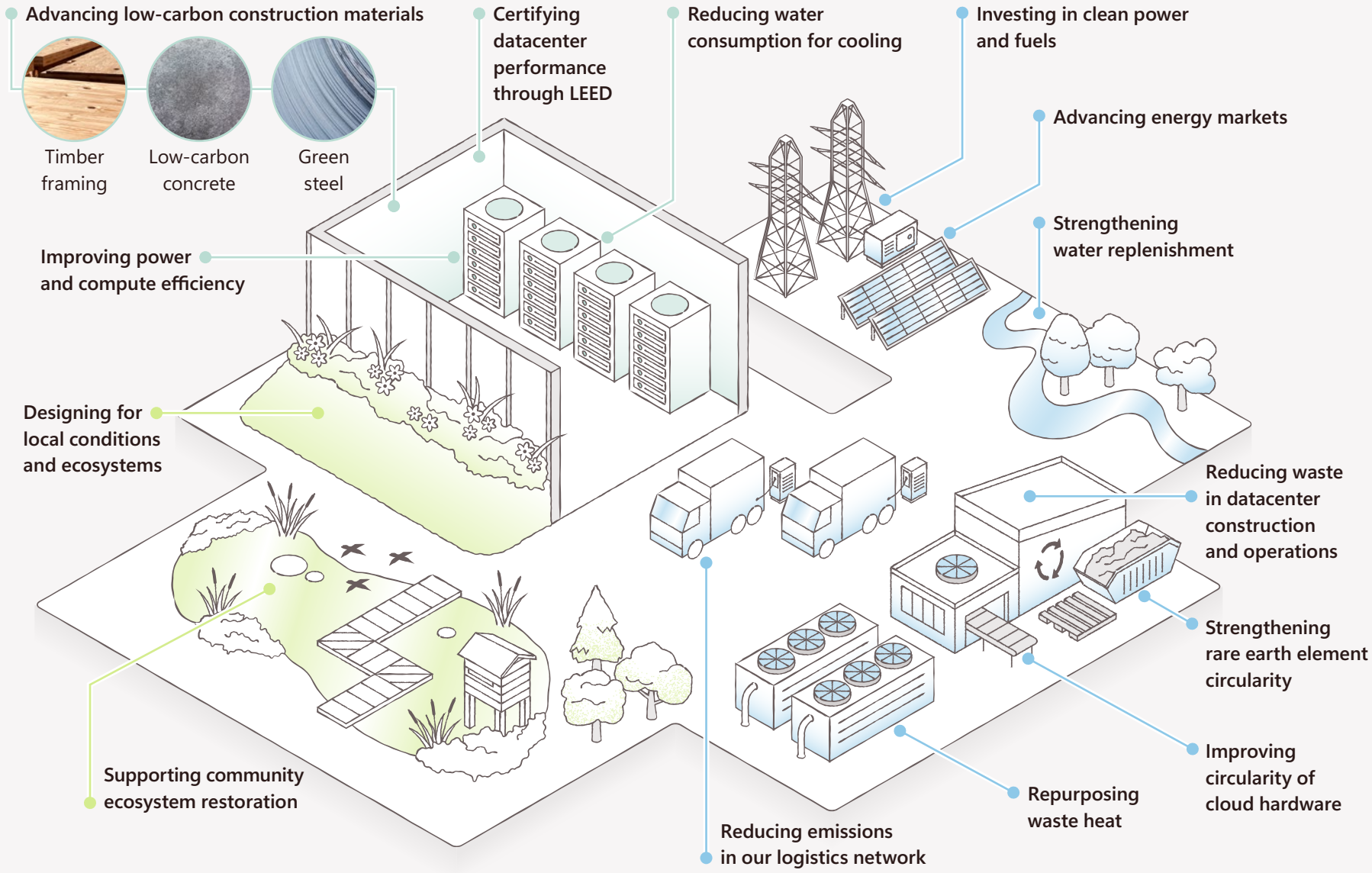
Key

How we design
Read more on page 17

How we build
Read more on page 20

How we operate
Read more on page 22

Examples of innovations deployed across Microsoft's datacenter portfolio; technologies vary by location and design.



Datacenters continued

How we design

A significant share of a datacenter's lifetime emissions are determined before it is even operational, driven by early decisions about materials, structure, and system design.

At Microsoft, we are working to address the environmental footprint of our datacenters from the start. We are advancing next-generation cooling technologies that minimize freshwater use, reducing carbon through more energy-efficient infrastructure and lower-carbon building materials, and embedding circularity into our operations to extend the life of servers and components through reuse and recycling. These and other design choices help ensure our growing infrastructure is built to support and advance sustainability.

Embedding carbon reduction across design

In support of our carbon targets, we are working to reduce the embodied carbon[5] of each project design by 30% from our baseline datacenter design. We use three primary strategies:

- **Design efficiency.** We're optimizing structural grids—the internal skeleton of a building—and minimizing the volume of construction materials needed, without compromising performance.
- **Materials innovation.** We're increasing the use of lower-carbon concrete and steel (discussed in detail later in the chapter).
- **Strategic procurement.** We're using environmental product declarations (EPDs)[6] to inform materials selection and focus on lower-carbon options, helping to accelerate market adoption.

We're also championing innovative approaches to datacenter design. For example, our multi-story datacenters can reduce embodied carbon by 15–25% and use less land than our standard design. We have also piloted constructing datacenters with hybrid mass timber, a strong and ultralightweight wood, which has demonstrated a reduction up to 35% in structural embodied carbon[7] compared to datacenters designed with conventional steel frames.

We are working to address the environmental footprint of our datacenters from the start.

Up to 35%

reduction in structural embodied carbon with our hybrid mass timber datacenters.

Datacenters continued

Improving water and energy efficiency for cooling

Cooling is one of the most resource-intensive aspects of operating a datacenter, making it a longstanding focus of Microsoft's efforts to improve efficiency and reduce environmental impact. As servers operate, they generate heat that must be managed continuously. Doing so requires energy and, in many conventional cooling systems, water through evaporation. Improving how we cool our infrastructure is therefore central to reducing its overall environmental footprint. We employ multiple strategies to increase the efficiency of datacenter cooling:

- **Liquid cooling**: In 2024, we introduced a new cooling system design that brings liquid coolants directly to our servers' chips, where the heat is generated. This approach avoids evaporative cooling altogether by circulating liquid in a closed loop between servers and chillers, preventing continuous water loss. We expect this design to avoid the need for more than 125 million liters of water per year, per datacenter.
- **Microfluidics**: In 2025, Microsoft continued its efforts to advance chip-level cooling through technologies such as microfluidics, which uses silicon-etched channels to carry cooling liquid directly to a computer chip's warmest spots. Using AI, we optimize the pattern of the channels to concentrate cooling where it's needed most based on the type of chip.
- **Zonal cooling**: In datacenters where liquid-based, chip-level cooling is deployed, we are continuing to refine these systems to further reduce water consumption. Our latest design uses a zonal cooling strategy, which allows warmer water to cool most IT equipment, and only directs cooler liquid to higher-heat, high-intensity workloads, improving energy efficiency. We aim to use zonal cooling wherever feasible.

Certifying datacenter performance through LEED

Microsoft designs new datacenters worldwide to achieve LEED Gold certification. In 2025, 25 Microsoft datacenter projects achieved this, bringing our global total to 80 certified projects. We remain the only large-scale cloud services provider participating in the LEED Volume Program, which is designed to ensure consistent performance across sites.

Designing for local conditions and ecosystems

Each datacenter site presents unique environmental and ecosystem conditions. We adjust design elements—such as planting and grading—to respond to local climate, water, and land characteristics. Our design teams tailor projects to these conditions, prioritizing native landscaping and efficient irrigation in drought-prone regions and improving insulation and heating efficiency in colder climates.

We're exploring site-specific strategies to support native species and improve long-term site resilience. At our future Ohio datacenter site, this includes a pilot ecosystem enhancement strategy that uses a native seed mix tailored to local conditions. This strategy aims to support rapid vegetative cover, erosion control, and long-term biodiversity, while requiring less ongoing maintenance.

Improving how we cool our infrastructure is central to reducing its overall environmental footprint.

Datacenters continued

In FY25, we partnered with local nonprofits, municipalities, and volunteers to plant over 150,000 native trees. These efforts contribute to habitat creation while supporting functions such as stormwater filtration, shade, carbon capture, and soil stabilization.

Through our partnership with the Society for Ecological Restoration (SER), we are working to scale this approach. To date, we've funded 30 ecological restoration projects covering more than 600 acres and engaging over 9,000 community members in environmental programs.

We also work to mitigate the local environmental impacts of the datacenter infrastructure itself. To reduce the heat island effect, our datacenter projects typically include high-reflectance roofing, permeable pavements, and vegetated surfaces. These adaptations align with LEED Heat Island Reduction guidance and can help lower local surface temperatures, improve stormwater infiltration, and create cooler microclimates.

Supporting community ecosystems

At our Dublin, Ireland datacenter, an elevated landscaped area planted with native species works to enhance habitats while also improving soil quality, managing stormwater, and providing visual screening. In Amsterdam, Netherlands, our site-specific approach has included the creation of two small forests based on the Miyawaki method at nearby schools, with the aim of contributing to habitat connectivity and supporting vegetation growth in surrounding areas.

We also work with partners to support ecosystem restoration in communities near our datacenters. At our Boydton, Virginia campus, a large-scale effort restored over 16,300 linear feet of streams and 185 acres of pollinator habitat, and created over three miles of ADA-accessible walking trails. The project also included educational programming with local schools and libraries, linking environmental restoration with community learning.

Small forests in Amsterdam

Vegetated berms in Dublin

Dublin datacenter

Datacenters continued

How we build

How a datacenter is built can influence its environmental footprint throughout its lifetime. At Microsoft, we are working to reduce the impact of datacenter construction by advancing lower-carbon materials, minimizing construction waste, and improving how datacenters are built from the ground up.

Advancing low-carbon construction materials

Concrete and steel are among the largest sources of embodied carbon in construction, accounting for 8% and 7% of global carbon dioxide emissions, respectively.[8,9] Through research undertaken by Microsoft Research and collaborations supported by our Climate Innovation Fund (CIF), we are exploring how to deploy lower-carbon alternatives.

Piloting low-carbon concrete

In 2025, we completed rigorous field testing for two lower-embodied-carbon concrete products developed by suppliers Ozinga and Urban Mining Industries. These mixes use waste materials, such as blast furnace slag and recycled glass, to replace a portion of Portland cement—a key driver of emissions in conventional concrete—which can substantially reduce the embodied carbon. Based on the results of performance testing, we plan to pilot lower-carbon concrete mixes in select datacenter builds, with potential for broader integration over time.

Elsewhere, Microsoft and University of Washington researchers used machine learning to accelerate the design and testing of lower-carbon cement formulations incorporating algal biomaterial. This work identified a formula with 21% lower global warming potential.[10]

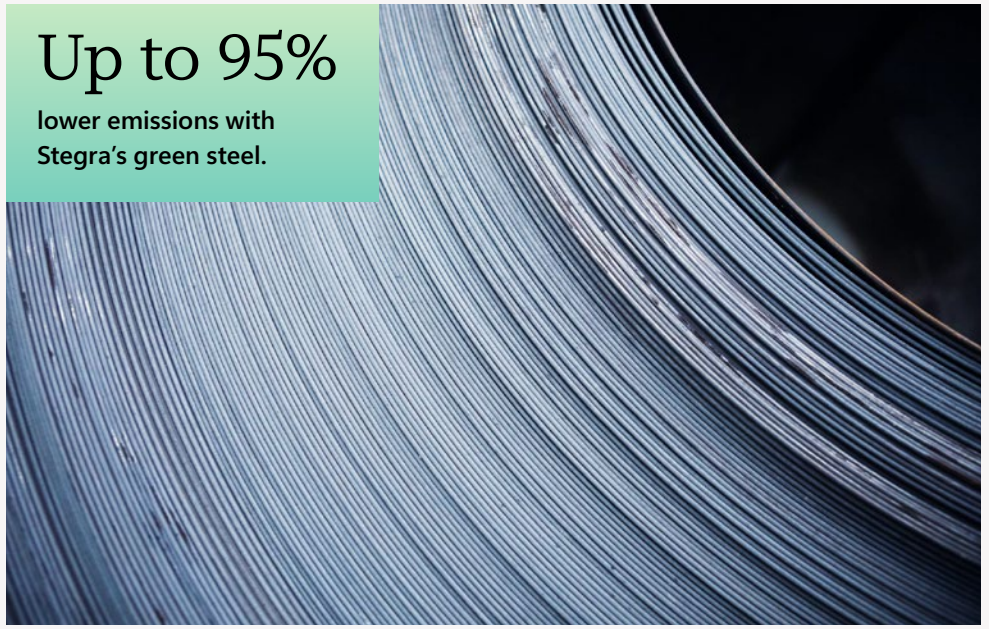
Expanding the market for green steel

To support the development of lower-carbon alternatives to conventional steel, Microsoft has partnered with steel company Stegra, which is building the world's first large-scale green steel plant in northern Sweden. Through this agreement, Microsoft expects to secure near-zero-emissions steel, along with environmental attribute certificates,[11] over seven years.

Supported by CIF, this agreement helps expand the market for low-carbon construction materials by providing our datacenter suppliers with access to Stegra's steel, which is manufactured with up to 95% lower emissions. It also supports our goal to be carbon negative by 2030 while driving broader adoption across the construction value chain.

Up to 95%

lower emissions with Stegra's green steel.



Datacenters continued

Reducing waste in datacenter construction

In FY25, we diverted 90.5% of our construction and demolition waste from landfills and incinerators, exceeding our target for the second year in a row. Our zero-waste strategy for datacenter construction starts with detailed planning. At Microsoft, we set construction and demolition waste management plans that establish expectations for waste handling throughout the work. Processes are put in place to separate waste streams, identify recycling and reuse facilities, and report diversion data every month over the course of each project.

These practices support high rates of material reuse and diversion from landfills. In line with our target, the majority of LEED-certified Microsoft datacenter construction projects divert at minimum 75% of construction and demolition waste from landfills and incinerators.

We are also exploring ways to drive further diversion from landfill or incineration by incorporating circular economy principles into our datacenter construction and demolition waste management strategy. At a Microsoft UK site, for example, we successfully deconstructed existing structures and removed steel components for potential reuse in the new datacenter construction.

90.5%

diversion rate achieved for construction and demolition waste.

Reducing generator emissions during construction

Microsoft is testing lower-emission alternatives to fossil fuel generators in construction settings. Our partnerships with Instagrid and Ferrovial show how battery-powered temporary power systems can be used in place of conventional generators. Three portable Instagrid IG ONE units were used during concrete work at our Madrid datacenter, helping to reduce onsite generator emissions and improve worker safety through lightweight, cable-free equipment.

How we operate

How we operate our datacenters is a critical lever in reducing emissions as demand for cloud and AI services grows. Thoughtful, intentional operational decisions—across how electricity is sourced and used, how water is managed, and how materials and hardware are kept in circulation—can improve efficiency, lower resource intensity, and support more sustainable growth over time.

Energy

Advancing energy markets

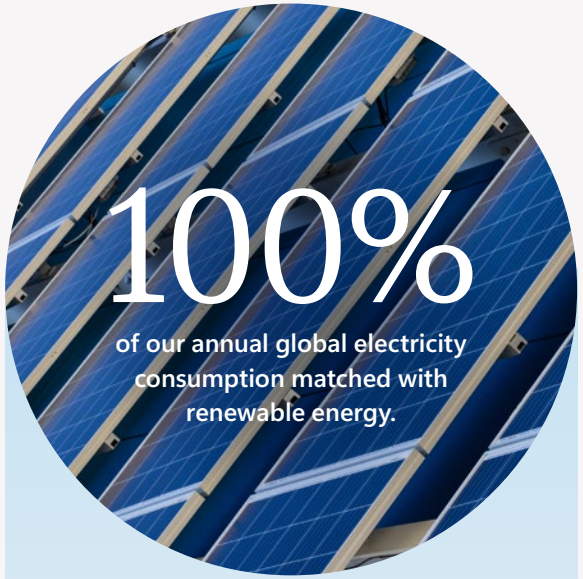
Matching our datacenters' electricity usage with CFE is an important tool for reducing the emissions associated with our operations. As demand for AI and cloud services grows, expanding access to CFE while improving how that energy is used is critical to reducing overall impact.

Expanding deployment of CFE is a key part of our approach. In FY25, we achieved our milestone to match 100% of our annual electricity consumption with renewable energy.[2] This helps decarbonize Microsoft's operations while supporting the development of new CFE supply on power grids, often targeting local grids where we operate.

These efforts also contribute to broader changes in the energy systems where we operate. Since the beginning of the program, we have agreements encompassing up to 40 gigawatts (GW) of new renewable energy across 26 countries, which include frameworks like our 2024 agreement with Brookfield for up to 10.5 GW. This helps expand carbon-free electricity availability and support innovation in power markets. Of that volume, 19 GW are now online.

We are also reducing reliance on fossil diesel by expanding the use of renewable diesel fuel (RD). This includes increasing the use of hydrotreated vegetable oil to roughly 60% of our datacenters in Europe—including sites in Dublin and Amsterdam. As of the end of 2025 we also use RD in Phoenix, San Antonio, and Atlanta in the United States.

To address the rising power demands of AI, Microsoft Research is exploring new approaches to how datacenters are sited and connected to energy systems. This includes investigating the deployment of smaller, modular datacenters at renewable energy sites. Currently in the simulation stage, this work explores how AI workloads can be distributed across locations based on the availability of CFE. This approach could allow AI workloads to help manage intermittency as a portfolio—balancing variability in energy availability across locations—rather than relying solely on storage or backup generation.



Datacenters continued

Improving power and compute efficiency

Improving how power and compute are used across our datacenters is a key part of reducing operational resource intensity as demand for AI and cloud services grows. We focus on optimizing how available capacity is used, reducing unnecessary energy consumption, and improving efficiency across hardware and workloads.

We also design and build Microsoft datacenters with a focus on power usage effectiveness (PUE), an industry-standard metric that describes how efficiently a datacenter uses energy. PUE compares the total energy required to operate a facility—including cooling, power distribution, and supporting systems—to the energy used directly by IT equipment such as servers and networks.

A PUE value closer to 1.0 indicates higher efficiency, meaning more of the energy consumed is used for computing rather than overhead. At Microsoft, we target a PUE as near to 1.0 as possible. In FY25, our datacenters delivered a global average PUE of 1.17.

We are improving energy efficiency across our datacenters through several complementary approaches:

- **Power harvesting:** We are reallocating unused power within existing datacenters to increase utilization, allowing more workloads to run without adding new infrastructure. This improves efficiency and can reduce the need for additional infrastructure over time, which may also lower associated embodied carbon. In FY25, we harvested over 690 megawatts (MW).
- **Low-power operating states:** We are reducing server energy consumption on select unallocated servers. By the end of 2025, these approaches had scaled to nearly 4 million servers globally.
- **Hardware collaboration:** We are working with hardware vendors, including through codesign efforts with Intel, to improve the energy efficiency of allocated servers.

We are also improving how workloads are distributed across our infrastructure. At LinkedIn, engineering teams are improving visibility into compute, storage, memory, and GPU utilization to help identify underused capacity, improve resource allocation, and support growing workloads more efficiently. This work demonstrates how operational efficiency can help reduce the resources required to deliver digital services at scale.

25%

reduction in water usage effectiveness in our owned datacenters since 2022.

Datacenters continued

Water

Reducing water use in our datacenters

Reducing water use in datacenter operations is a key part of improving overall resource efficiency. We focus on optimizing cooling systems, improving water usage effectiveness (WUE),[12] and reducing reliance on municipal water supplies across our owned datacenters.

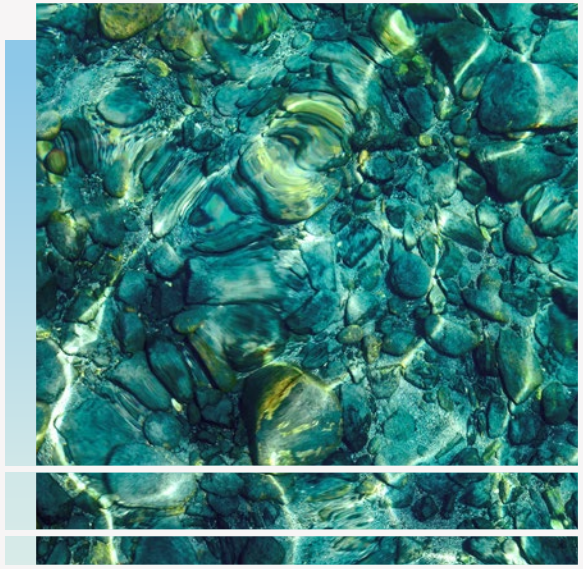
Following an internal analysis of our standard cooling systems, we improved them to better control temperature and air conditions while using less water. These adjustments helped improve WUE by 23% in our Phoenix, Arizona, datacenters in FY25 compared to the previous year. We're now deploying these advancements across Microsoft-owned datacenters with similar cooling systems.

Based on our FY25 global average WUE of 0.27 L/kWh, our owned datacenters have achieved a 25% reduction in WUE since our 2022 baseline, progressing towards our 2030 target of a 40% reduction.

We have also reduced non-cooling water at select datacenters by implementing water efficiency measures aligned with LEED guidance, helping conserve local water resources, particularly in drought-sensitive regions.

We are also reducing reliance on fresh water by deploying alternative water sources where feasible.

Microsoft's new datacenter in the Amsterdam region features a full-scale rainwater harvesting system for a water-stressed[13] environment. Rainwater is collected and stored in the regional aquifer through a partnership with the local utility. The system is expected to collect more than three times the water annually required for cooling, with the remaining volume supporting reliable water access for the local community.



Strengthening water replenishment

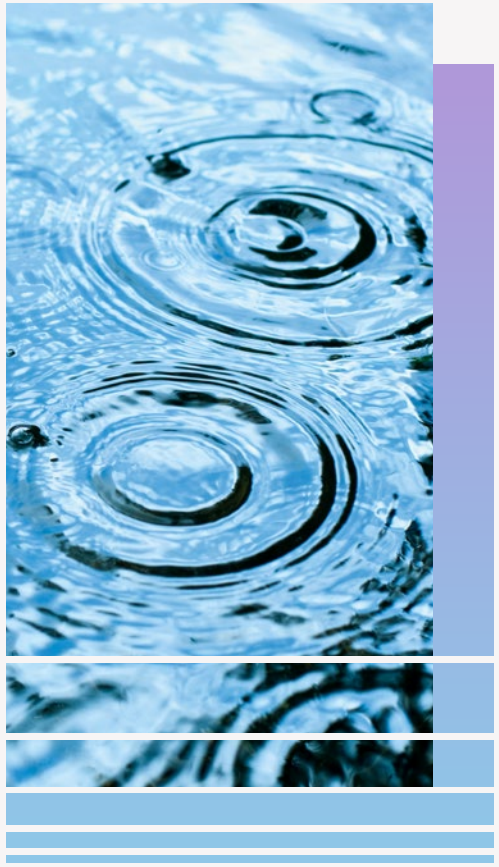
Replenishing water and expanding access are core pillars of our water positive commitment. We are strengthening this work by focusing on watershed-scale projects to return more water than we withdraw and strengthen long-term watershed resilience.

Through our Community-First AI Infrastructure approach, we seek to align these replenishment and access investments with local priorities. We work with communities and utilities to support reliable water supplies, healthier ecosystems, and more resilient water systems in the communities where we operate. In FY25, we:

- Strengthened our replenishment target to focus on total water withdrawals,[14] rather than consumption.[15] This more rigorous approach aligns replenishment with the full volume of water withdrawn across our datacenters, not just the portion evaporated for cooling. This approach improves accuracy and consistency in how progress is measured and reinforces our focus on positive impact in priority regions.
- Replenished over 14.2 million cubic meters (m^3) of water, which, for the first time, surpassed our global water withdrawals.[16] While we're proud of this milestone, our focus is on advancing replenishment locally, working watershed by watershed to replenish more water than we withdraw in each priority region where we operate.
- Funded 24 new water replenishment projects, estimated to provide more than 29 million m^3 in volumetric water benefit over their lifetime. To date, contracted projects represent more than 133 million m^3 of replenishment volume over their lifetime[17]—the equivalent of 53,200 Olympic-sized swimming pools[18]—with our footprint now spanning 34 priority locations globally.

We are focusing on watershed-scale projects to return more water than we withdraw and strengthen long term watershed resilience.

Datacenters continued



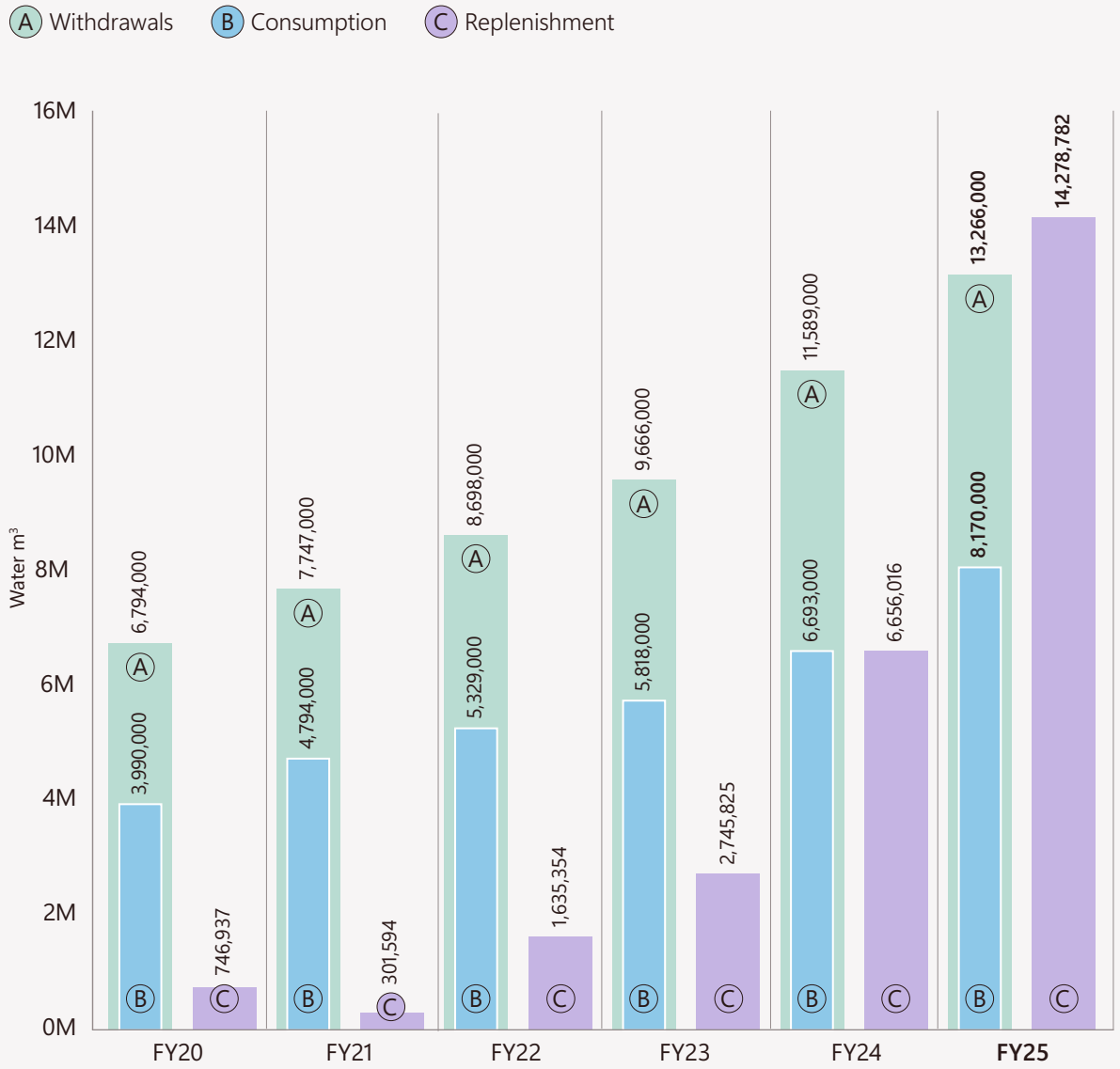
Advancing water replenishment

In FY25 we replenished more water than we withdrew—advancing a more rigorous, system-level approach to accountability than targeting consumption alone. This progress reflects our broader aim to build technology that gives more than it takes, strengthening long-term water resilience as we scale.

Find out more in our Data Fact Sheet

To date, contracted projects represent more than 133 million m^3 of replenishment volume over their lifetime—the equivalent of 53,200 Olympic-sized swimming pools.

We use primary data to calculate water withdrawal and consumption volumes. We use estimates where primary data is not available. Values for all previous fiscal years have been recalculated to improve accuracy in accordance with our internal recalculation policy to include: 1) previously unreported water volumes due to enhancements in our data-capture capabilities; and 2) the updated estimation approach for water withdrawals and consumption originally applied beginning in FY24, to ensure methodological alignment and year-over-year comparability.



Datacenters continued

Circularity

Reducing waste in datacenter operations

We're driving down the operational waste in our datacenters by prioritizing waste prevention and embracing circular practices, in support of our 90% operational waste diversion target. One way we're operationalizing this approach is through improving the circularity of our datacenter uninterruptible power supply (UPS) batteries. These batteries protect essential infrastructure and data that Microsoft and our customers increasingly depend on, by providing backup power during grid interruptions and outages. Because UPS batteries degrade over time, we're using their periodic replacement as an opportunity to responsibly manage these resources. In FY25, Microsoft successfully recycled over 2,100 metric tons of UPS batteries globally, reducing waste while recovering valuable materials.

Additionally, we're continually searching for new diversion opportunities for datacenter packaging and logistics materials such as wood pallets. As we've grown our network of haulers worldwide, we've significantly increased the amount of wood that we can route for recycling and reuse, successfully diverting nearly 230 metric tons of wood this year.

By consistently measuring and managing materials used in our datacenter operations, we identify opportunities for additional reduction, reuse, and diversion of datacenter material from landfill and incinerators.

Improving circularity of cloud hardware

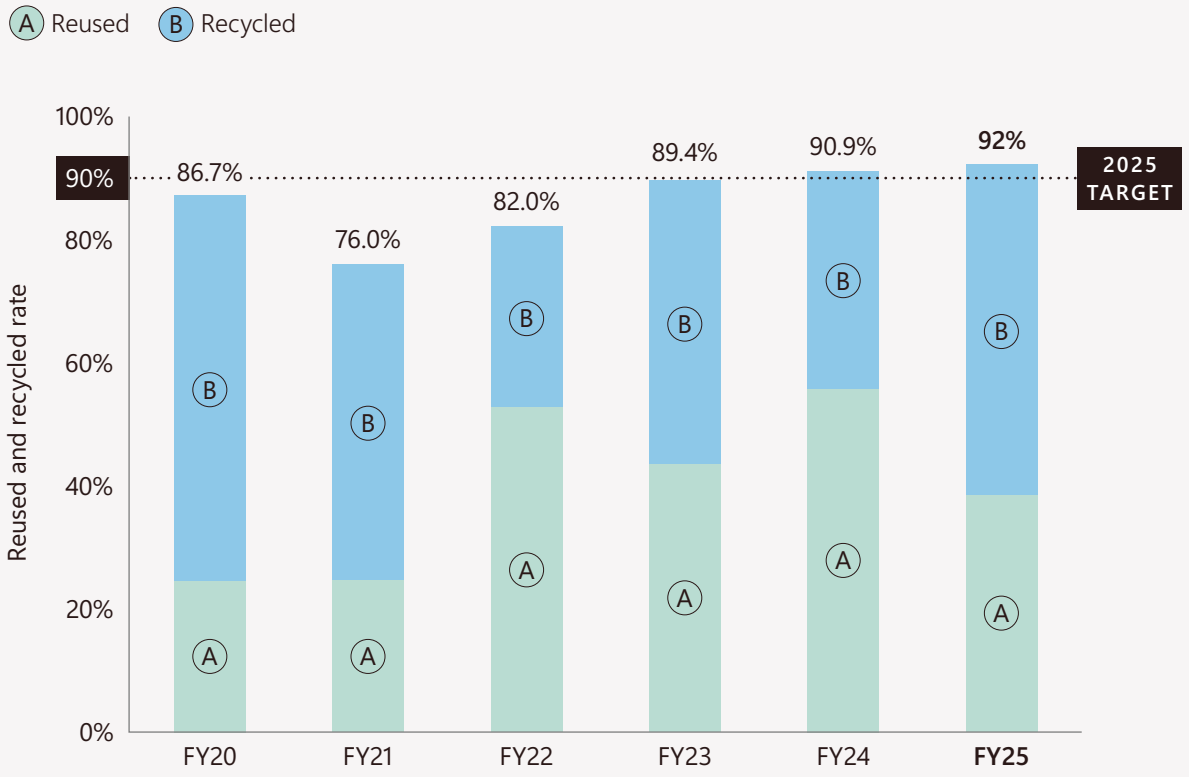
Our Circular Centers program is designed to reduce datacenter e-waste by reusing, refurbishing, and recycling decommissioned servers and components. In FY25, we achieved a 92% reuse and recycling rate across decommissioned hardware, exceeding our 90% target for the second consecutive year.

We continue to expand our Internal Reuse Program to recover and redeploy decommissioned server components that are no longer available through commercial supply chains. This program tests and recertifies components for reuse through our growing network of Circular Centers, helping to meet demand across Microsoft's global operations for spare parts.

We're also advancing circularity through the Microsoft Direct Recycling Program, a collaboration with global recycling partners to improve material recovery, gain insights on recycling efficiency, and reduce waste. These efforts are supported by Microsoft Dynamics 365 and are evolving to incorporate AI-enabled automation including robotic disassembly and autonomous material handling to build efficiency and scale. Through CIF, we have also invested in Molg, which uses AI-driven robotics to autonomously and non-destructively disassemble datacenter hardware, enabling the recovery of components for reuse, remanufacturing, or recycling.

Improving reuse and recycling of cloud hardware

In FY25, Microsoft achieved a 92% reuse and recycling rate for servers and components, exceeding its 90% target for the second consecutive year. This progress reflects continued investment in circular solutions that reduce waste and recover materials while lowering overall resource demand.



Datacenters continued

Strengthening rare earth element circularity

Improving circularity in critical mineral supply chains is a priority, including rare earth elements (REEs) used in datacenter hardware.

Through CIF, we've invested in companies advancing material recovery. This includes Cyclic Materials, which is pioneering advanced recycling of REEs and critical materials. In partnership with suppliers, we are improving recycling for end-of-life hard disk drives, enabling the recovery of REEs like neodymium along with other materials used in datacenter equipment. In 2025, Microsoft received the Social Impact of the Year award from the Gartner® Power of the Profession™ Supply Chain Awards.[19]

These efforts support the return of critical materials to the supply chain for reuse, reducing reliance on virgin material extraction, diverting material from landfill, and strengthening long-term supply chain resilience.

We're rethinking waste heat not as a byproduct, but as a potential resource.

Repurposing waste heat

Microsoft is rethinking the heat generated in our datacenters, treating it not simply as a byproduct to be managed, but as a potential resource to share where feasible. Through waste heat reuse (WHR), we are exploring how this energy can be captured and applied to nearby systems and community uses, rather than dissipated. In some cases, this can offset thermal or energy demand elsewhere, helping to improve overall system efficiency while providing local benefits.

For every 1 MW of heat repurposed externally, cooling demand can be reduced by up to 1 MW, reducing electricity required for cooling systems, improving PUE, and lowering operational costs.

We are also exploring how WHR can support applications such as direct air capture (DAC). DAC systems historically have been difficult to scale due to high energy demand, but supplying them with datacenter waste heat could potentially decrease electricity consumption by more than 20% while increasing productivity by more than 20%. Early investigations suggest that repurposing just 1 MW of waste heat for DAC could enable the removal of up to 5,000 metric tons of carbon dioxide annually, turning a previously unused resource into a scalable climate-positive solution.

This work is supported through leadership in the Open Compute Project (OCP) Heat Reuse Subproject, which aims to help drive industry innovation for scalable heat reuse.

Diverting rack packaging

Server racks require protective packaging during transport and deployment across our datacenters. In 2025 we expanded our recycling and reuse capabilities for server rack packaging across all owned datacenters, enabling us to divert more than 9,000 metric tons of server-rack delivery packaging waste from landfills and incinerators.

To improve circularity in the design of our rack packaging, we are now working towards incorporating 75% circular content[20] in the packaging for servers and components by 2030, in partnership with suppliers, certifying bodies, and logistics partners.

9,000

metric tons of server-rack delivery packaging waste was diverted from landfills and incinerators.

Scaling energy solutions

As demand for cloud and AI infrastructure increases, so does Microsoft's need for clean, reliable energy. Continued progress will likely require a broader CFE portfolio, continued investment in new technologies, stronger grids, and continued collaboration with utilities, regulators, and partners.

Sustaining pace with the infrastructure and energy needs of growth will require a diverse portfolio of new carbon-free energy projects, along with increasingly sophisticated tariff structures and energy supply agreements with utilities, regulators, and partners to expand the integration of new clean energy supply as our energy footprint grows.

Investing in clean power and fuels

Through CIF, we support the development and commercialization of energy solutions that help change how power is generated and lower-carbon fuels are produced. These investments focus on practical technologies that support our energy needs while also contributing to wider energy system transformation across diverse markets.

Microsoft also supported clean energy infrastructure in markets where investment can help accelerate the shift away from fossil fuels. Microsoft led private sector investment in the Southeast Asia Clean Energy Facility, which provides early-stage funding for clean energy projects in a region where coal remains a major part of the energy mix.

Since then, the facility has mobilized $230 million in private sector debt and equity—more than 100 times Microsoft's initial contribution. Elsewhere, Microsoft backed Konexa, an integrated power company in Nigeria, by providing construction finance for a trading platform and distribution infrastructure that links Heineken, a major power consumer, to renewable energy.

Sustainable fuels are another important component of our decarbonization portfolio. CIF continues to invest in companies advancing sustainable fuels production for Microsoft and the broader market. Twelve, which transforms carbon dioxide into chemicals, fuels, and materials, raised $645 million in follow-on funding—one of the largest financing rounds in the e-fuels[21] space to date. Dimensional Energy secured the first commercial deployment of its catalyst technology for applications including base oils, sustainable aviation fuel (SAF), and diesel. Its British Columbia plant processes one ton of carbon dioxide per day from a cement flue stack into synthetic crude.

Scaling energy solutions continued

Investing in power innovation

In 2025, CIF-backed companies advanced a range of clean power technologies. Eavor Technologies completed the first operational loop of its closed-loop geothermal system in Geretsried, Germany, marking an important step toward scaling geothermal energy as a reliable source of sustainable energy. VEIR also demonstrated its patented superconducting technology by delivering 3 MW of power in a simulated datacenter environment, proving its potential to power AI factories and datacenters with a smaller physical footprint.

Supporting clean, community-based energy

As Microsoft works to expand access to CFE, part of that effort involves supporting smaller-scale, community-based energy projects that can deliver both clean power and local benefits. These projects help broaden access to renewable electricity while also supporting workforce development, community investment, and more resilient local energy systems.

In FY25, Microsoft continued to expand distributed generation at scale. Building on the 500-MW Pivot Energy framework agreement announced in 2024, Microsoft signed a suite of agreements enabling up to 1.5 GW of projects across approximately 100 communities in 20 US states. These projects are intended to support local energy needs, workforce development, community investment, and lower energy costs for low-income households through Sustain Our Future Foundation.[22]

Additional partnerships with Nexamp, Clearloop, Sunwealth, and Powertrust are helping extend this approach across the United States, Brazil, and Mexico. Together, these projects support community solar and distributed energy generation, with benefits that include local jobs, energy bill savings, investment in underserved communities, and support for schools, affordable housing providers, small and mid-sized businesses, and other community-serving institutions.

We also work through coalitions to scale community-centered renewable energy development. This includes the Acadia Infrastructure Capital Climate and Communities Investment Coalition, which helps companies support clean energy projects that provide community benefits across the United States.

Advancing nuclear energy

Nuclear energy will play a powerful role in a decarbonized energy future. Microsoft is exploring nuclear energy as a potential source of CFE to help meet growing demand from datacenters and AI infrastructure. Because it can provide consistently available, high-capacity-factor[23] power, nuclear can play a role in supporting AI and cloud workloads as a part of a broader CFE portfolio.

We use a structured framework to assess nuclear opportunities, including technical, regulatory, and commercial viability. This includes reviewing technology maturity, licensing feasibility, supply chain readiness, and deployment strategy. We're working with nuclear developers, suppliers, and utilities to refine licensing pathways, and using AI to improve deployment models and commercialization timelines.

One example is our power purchase agreement with Constellation to restart the Crane Clean Energy Center, formerly known as the Three Mile Island Unit 1 reactor. Decommissioned in 2019 due to economic reasons, the facility offers a model for evaluating how conventional fission could support Microsoft's long-term CFE portfolio.

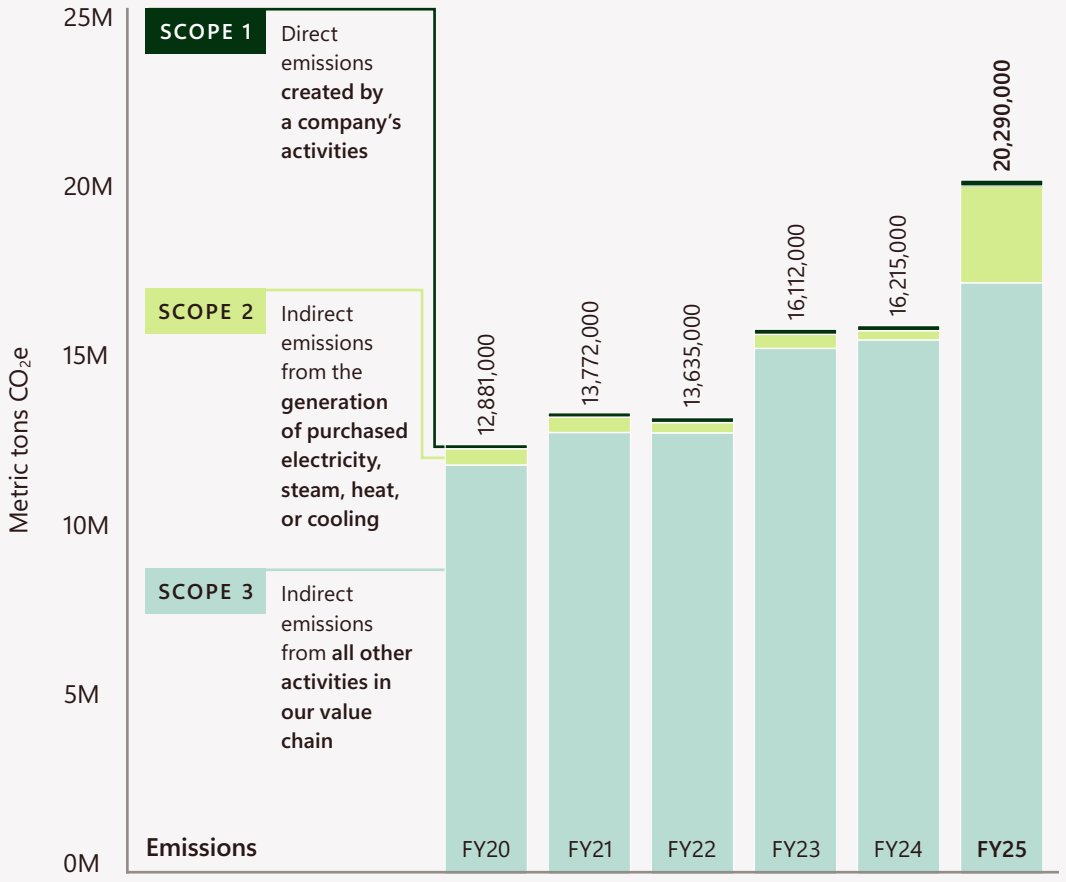
We are also exploring the potential of fusion as a next-generation source of CFE. Through our agreement with Constellation, Microsoft is partnering with Helion Energy, which is constructing its first commercial fusion plant in Washington state with the aim of delivering clean, consistently available power.

Fusion still presents significant technical challenges, including the need for materials that can withstand extreme conditions inside reactors. We're partnering with the Princeton Plasma Physics Laboratory, the International Thermonuclear Experimental Reactor, and the Swiss Federal Institute of Technology to explore how AI, high-performance computing, and digital engineering can help identify new options.

Scaling energy solutions continued

Managing energy and emissions

Microsoft's emissions increased in FY25, reflecting rapid cloud growth and a deliberate shift toward long-term carbon-free electricity investments that add new capacity to grids.



Scope 2 and 3 emissions included in this chart are market-based.
Scope 3 emissions are management's criteria values.

Learn more in our Data Fact Sheet

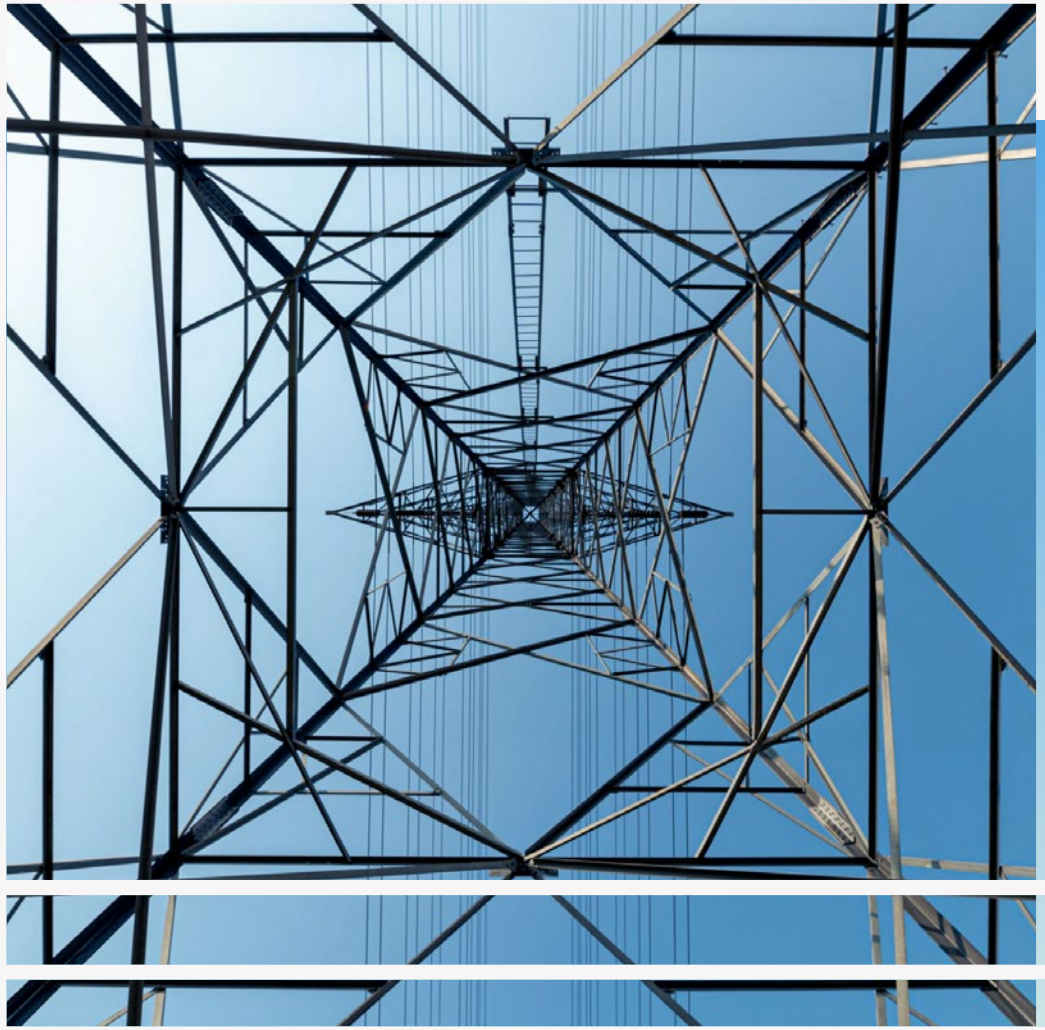
Our total emissions (Scopes 1, 2, and 3) increased 25% year over year, driven primarily by the expansion of our datacenter infrastructure and stopping our use of non-additional, unbundled renewable energy certificates as we prioritize investments that bring net new power to grids. While this decision increases our reported emissions in the near term, it enables us to increase the development of new CFE rather than relying on certificates alone. We believe this approach will help drive more durable long-term emissions reductions.

One of the clearest shifts this year was the growing contribution of Scope 2 emissions, which represented 13% of our total emissions, up from nearly 2% last year. This development underscores the growing role energy systems play in shaping environmental outcomes and why advancing CFE remains critical to long-term progress. While Scope 3 remains the largest share of our footprint overall, we continue working with suppliers to advance decarbonization across our value chain.

Strengthening grid infrastructure and resilience

Microsoft continues to engage with governments and regulators to help strengthen grid infrastructure and ensure energy systems can meet rising demand. In December 2025, the European Commission announced the European Grids Package, a legislative initiative aimed to make the grid more digitalized, decentralized, and flexible. Microsoft engaged with European policymakers and grid operators to help anticipate energy demand from the datacenter sector and support better integration of digital infrastructure into European grids. We continue to advocate for grid expansion and optimization, stronger integration of digital technologies in the energy sector, and coordinated action to support Europe's decarbonization and electrification.

Scaling energy solutions continued



In Asia, Microsoft has put forward policy positions on grid modernization in markets where rising digital infrastructure demand intersects with system constraints. This work is grounded in markets where Microsoft has a significant semiconductor or datacenter footprint—primarily South Korea, Japan, Taiwan, and key Southeast Asian markets. Across these regions, Microsoft has identified priorities including transmission expansion, interconnection reform, market transparency, and access pathways for CFE, and engaged governments, regulators, utilities, and industry coalitions to help advance them.

In the United States, Microsoft engaged with policymakers and regulators to strengthen grid infrastructure and accelerate the buildout needed to meet rising electricity demand. At the federal level, we advocated for transmission expansion and reforms to expedite permitting and interconnection. We also engaged state and federal policymakers to advance energy affordability and new approaches for large energy customers.

Microsoft also works with regulators to advance sustainability standards for digital infrastructure. In the European Union (EU), Microsoft engaged with policymakers on the datacenter sustainability rating scheme, sharing technical expertise on how datacenters can be designed, built, and operated with stronger sustainability and efficiency outcomes. We advocated for a consistent, industry-wide approach across all EU member states that rewards best-in-class sustainable infrastructure.

Advancing carbon dioxide removal

Even as Microsoft works to reduce emissions through more efficient infrastructure, CFE, lower-carbon materials, and supply-chain action, some emissions remain hard to abate on the timeline required and global carbon balances have accumulated in recent decades. Carbon dioxide removal (CDR) is part of a broader set of solutions and markets needed to support long-term carbon progress. Since 2020, Microsoft has used carbon removal procurement to help scale high-quality markets capable of addressing emissions over time, including Microsoft's historical emissions.

Building the market for carbon removal

Since 2020 we've worked to grow the CDR market, to support our carbon commitments, and to advance carbon removal globally. We began by defining criteria for high-quality CDR and structuring some of the first commercial contracts to purchase CDR credits. We've continued to conduct due diligence on roughly 200 CDR projects and use CDR procurement to signal market demand.

In 2025, our third year of signing long-term CDR credit contracts, we added 29 projects to the Microsoft CDR portfolio. We expect these projects, spanning five continents and 10 distinct CDR pathways, to contribute more than 45 million metric tons toward Microsoft's carbon goals over the next three decades—the equivalent of removing over 10 million internal combustion cars from the road for a year.[24]

Microsoft's CDR portfolio balances low-durability nature-based solutions and high-durability engineered solutions, structured to maximize rapid development of a high-quality market.[25] Balancing our portfolio across engineered and nature-based pathways spurs innovation, diversifies risks, and provides more opportunity for success.

Carbon dioxide removal is part of the broader set of solutions and markets needed to support long-term carbon progress.

Advancing carbon dioxide removal continued

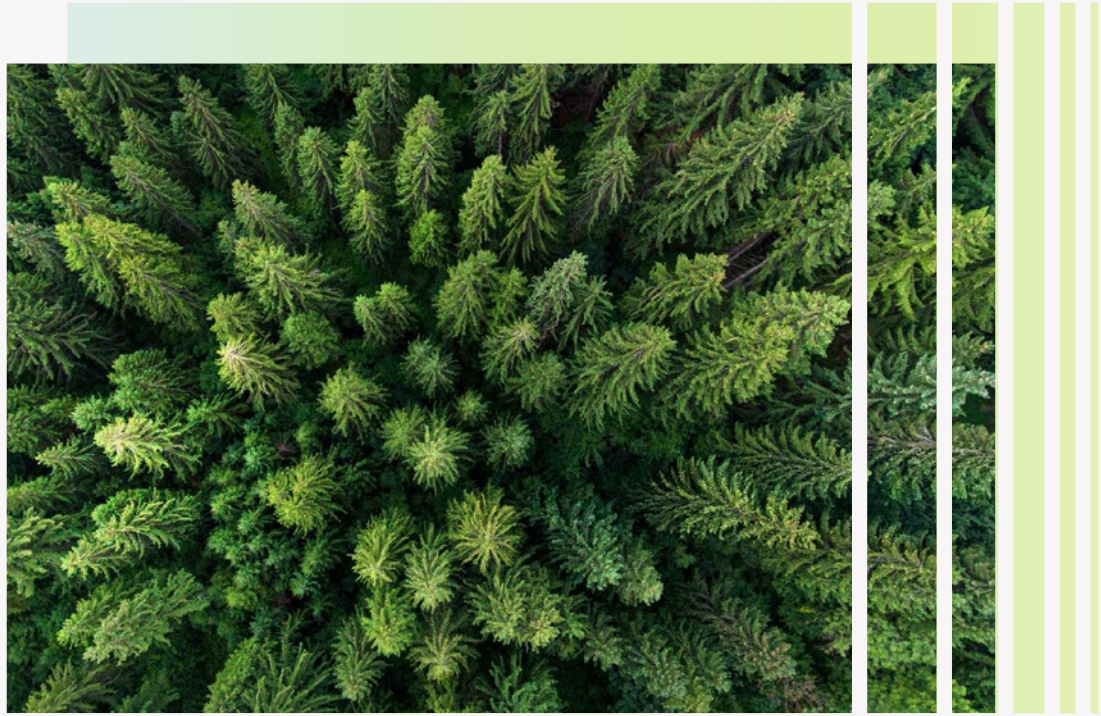
We've adapted our due diligence and contracting approach based on the type of CDR, its relative maturity, and its potential to scale. Building on the playbook that has helped to rapidly scale wind and solar energy, our long-term CDR purchase agreements enable innovation and growth. For engineered solutions, Microsoft CDR purchase agreements often cover 10 to 15 years, enabling developers to secure project financing based on our creditworthy offtake, which improves revenue certainty for suppliers and facilitates the raising of additional financing. Our nature-based CDR projects typically exceed 20 years, maximizing the benefits of longer carbon sequestration cycles.

Microsoft structures long-term CDR purchase agreements that enable innovation and growth.

45 million

metric tons of CDR contracted in FY25.

Advancing carbon dioxide removal continued



We are supporting the CDR market by catalyzing new solutions, accelerating learning, and contributing to outcomes that deliver value beyond our own portfolio.

Scaling long-term carbon removal

Our carbon dioxide removal portfolio includes both engineered and nature-based pathways, helping diversify risk, support innovation, and expand the range of available carbon removal solutions.

Bioenergy with carbon capture and storage (BECCS) and afforestation, reforestation, and revegetation (ARR) make up the majority of Microsoft's portfolio, reflecting their technical maturity and repeatability. In FY25, Microsoft expanded commitments in both areas, including agreements with CO280 and Stockholm Exergi in BECCS, and with Rubicon Carbon and Chestnut Carbon in ARR. Together, these projects show how long-term offtake can help scale carbon removal while also supporting industrial decarbonization, land restoration, rural livelihoods, and access to financing for large-scale nature-based projects.

In FY25, Microsoft also began procuring long-term carbon removal through improved forest management (IFM), soil organic carbon (SOC), biochar, and biomass carbon removal and storage (BiCRS). These pathways can offer shorter development timelines while contributing additional ecological and land-use benefits. Examples include projects with EFM and Anew Climate in forest management, Agoro Carbon Alliance in soil carbon, Exomad Green in biochar, and Vaulted Deep in BiCRS.

Testing and de-risking emerging pathways

In FY25, we continued investing in promising but early-stage CDR pathways, including enhanced rock weathering (ERW), direct air capture (DAC), and ocean alkalinity enhancement (OAE). Rather than using long-term offtake at this stage, we are making smaller purchases to assess viability, scalability, and environmental and community impacts of these solutions. This included purchases from ERW developers such as Undo, Eion, Lithos, and Terradot, as well as a founding-buyer role with Deep Sky, whose technology-agnostic hub model is intended to help test and accelerate DAC pathways.

Our pilot purchases can help de-risk emerging pathways, refine measurement, monitoring, reporting, and verification (MMRV) protocols,[26] and identify suppliers capable of delivering durable, scalable climate impact. Through this work, we're committed to supporting the market by catalyzing new solutions, accelerating learning, and contributing to outcomes that deliver value beyond our own portfolio. We continue to seek partners that are working on CDR solutions that combine scientific rigor and operational excellence.

Campuses

Microsoft's campuses are another important part of the physical infrastructure behind our business, enabling how employees work, collaborate, build, and connect with customers and communities every day. From offices, kitchens, and transit systems to meeting spaces, energy systems, and landscapes, campuses support the day-to-day operations, innovation, and experiences that power Microsoft's work.

Designing lower-impact workplaces

Choices about materials, retrofits, and workplace design shape the carbon impact of offices from the outset, which is why campus construction and renovation are an important part of Microsoft's broader decarbonization work.

Our LinkedIn 4 Wilton Park campus in Dublin illustrates that approach. Working with Flynn Construction and the NGO Building Transparency, LinkedIn used the Embodied Carbon in Construction Calculator to better understand the carbon impact of materials and enable the selection of lower-carbon options wherever possible. Combined with matching 100% of the campus's electricity consumption with CFE, that work resulted in the office receiving the Irish Construction Industry's Green Project of the Year Award. In FY25, LinkedIn also introduced biophilic design[27] to 4 Wilton Park and the London Experience Centre, integrating natural materials, forms, and lighting to improve occupant experience, strengthen connection to nature, and reduce carbon impact.

Electrifying campus operations

On campuses, some of the most direct opportunities to reduce Scope 1 emissions come from everyday operations—especially kitchens and vehicle fleets, where fossil fuel use still plays a meaningful role. Electrification helps address those emissions at the source.

Building on the success of the all-electric kitchens at One Esterra and East Campus in Puget Sound, Microsoft expanded electrification to additional campuses in FY25. In 2025, Microsoft opened its first all-electric kitchen in Suzhou, China, and added two more in India—a new build at Hyderabad's Central Kitchen and an electric retrofit at Bengaluru Ferns. Together, these three kitchens serve approximately 200,000 meals per month to employees using fully electric equipment.

Microsoft is also reducing direct emissions from campus transportation by expanding the use of electric vehicles (EVs) across Africa, Asia, Europe, and North America. This includes growing our office EV fleet to approximately 300 vehicles in India and constructing a new bus charging depot to power nine electric buses at our Dublin campus.

Campuses continued

Harnessing geothermal energy at our campus

At Microsoft's Puget Sound campus, the Thermal Energy Center taps geothermal energy deep underground to heat and cool new buildings through one of the largest geoexchange fields in the United States. Opened in July 2022, the all-electric system was designed to run about 50% more efficiently than a conventional utility plant serving the same load, based on engineering modeling.

Improving energy efficiency with data

Microsoft is reducing energy use across global campuses through a range of efficiency initiatives. These include heating, ventilation, and cooling (HVAC) improvements at our Washington state campuses, LED lighting upgrades in six European offices, and occupancy-based HVAC controls in our Dominican Republic locations.

At our headquarters, we use early detection to automatically identify and track energy inefficiencies, which are then triaged into maintenance orders. In FY25, this work completed over 350 fixes, delivering approximately 4,000 megawatt-hours of annual energy savings.

Our technicians and managers also use digital tools to help optimize energy use in our buildings and address inefficiencies more proactively. This year our Campuses team partnered with our internal IT team, leveraging Microsoft Dynamics 365 to strengthen machine learning and AI-driven fault detection and identify additional opportunities to reduce emissions.

Across approximately 830,000 square feet of LinkedIn campuses and office space, we're using predictive AI to improve building performance optimization. By identifying opportunities to improve utility performance and maintenance, we can reduce energy and water use.

Campuses continued

Conserving water through engineering and reuse

To support Microsoft's water positive commitment, we're reducing water use, prioritizing high-impact water conservation projects, and embracing targeted engineering solutions to improve water stewardship across our campuses.

At one of our Chicago, Illinois, campuses, a custom system captures and treats wastewater used for cooling IT equipment so it can be reused repeatedly. Combined with other efficiency improvements, this has helped cut the campus's use of municipal water by more than 30% year over year.

Across the broader real estate portfolio, we are also implementing water conservation projects such as smart water meters, automated irrigation systems, upgraded restrooms, HVAC condensation recycling systems, improved water treatment, and rainwater harvesting systems. At our Hyderabad campus, Microsoft installed an air-to-water system using approximately 300 hydro-panels to extract humidity and convert it into potable water.

Reducing campus waste and keeping materials in use

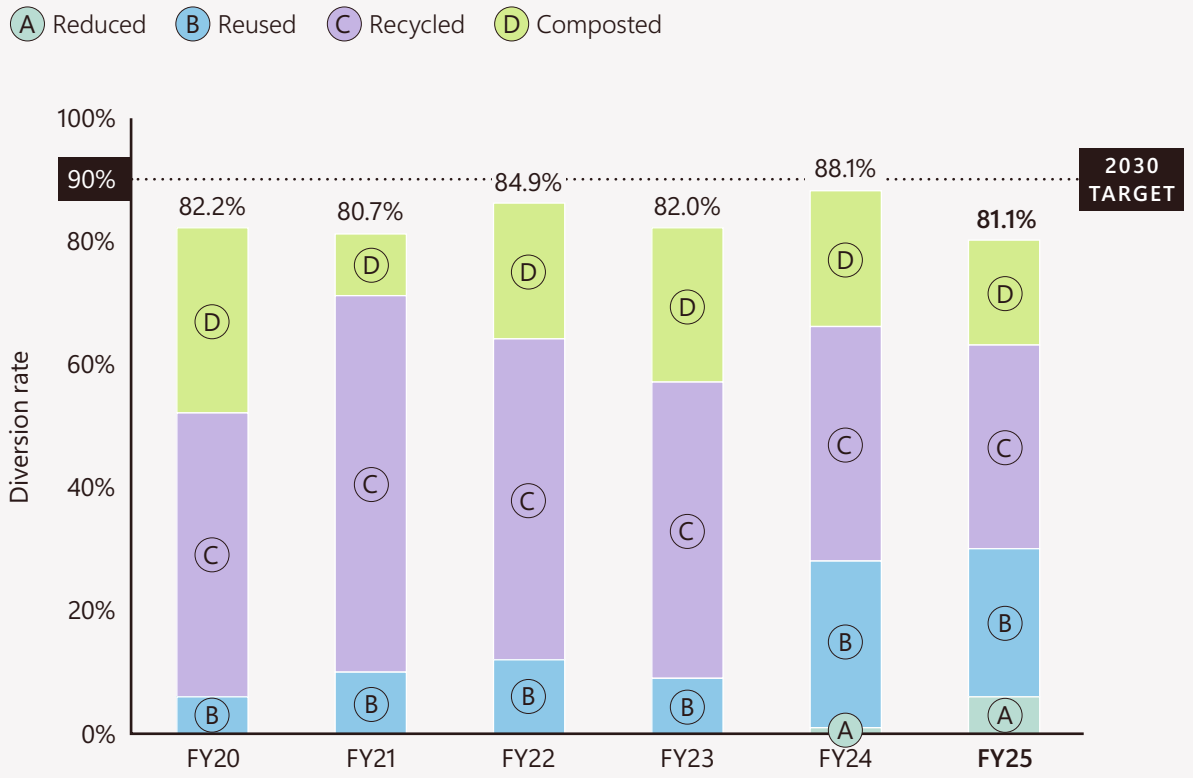
Microsoft is working to reduce waste across campuses by preventing it at the source, expanding reuse, and strengthening circular systems in day-to-day operations, in line with our 90% operational waste diversion target.

Microsoft has made significant strides towards our zero-waste commitment across our campuses. In FY25, eight of our campuses achieved third-party zero-waste validation. Seven were validated by UL Solutions based on landfill diversion performance, while one was certified through TRUE for embedding zero-waste practices into facility operations. Comprehensive waste audits helped us identify the types and volumes of waste generated, leading teams to emphasize durable goods over single-use items, introduce secondary sorting stations, and launch staff education campaigns to prevent waste on campus.

Diverting operational waste from landfills and incinerators

In FY25, Microsoft diverted approximately 34,000 metric tons of operational waste from landfills and incineration across datacenters and campuses. Continued focus on management of operational waste helps to reduce environmental impact while keeping materials in use and strengthening more circular, resource-efficient operations.

Find out more in our Data Fact Sheet



Campuses continued

Maintaining high diversion rates takes ongoing effort. Since earning zero-waste validation in 2024, our Dublin campus has continued to improve diversion through a durable goods program, expanding composting infrastructure, and employee engagement. In São Paulo and Brasilia, Brazil, and Bogotá, Colombia, campus teams diverted more than two metric tons of end-of-life furniture from landfills through internal auctions, public sales, and donations, including local donations to Laudes and Best Buddies. This builds on the more than 1,900 metric tons of office equipment Microsoft has donated to charities since 2010, in partnership with Green Standards. In FY25, LinkedIn offices also diverted more than 90 metric tons of furniture waste through a furniture reuse program, avoiding over 270 metric tons of carbon dioxide equivalent ($mtCO_2e$) emissions.

In FY25, LinkedIn offices diverted more than

90 metric tons

of furniture waste through a furniture reuse program.

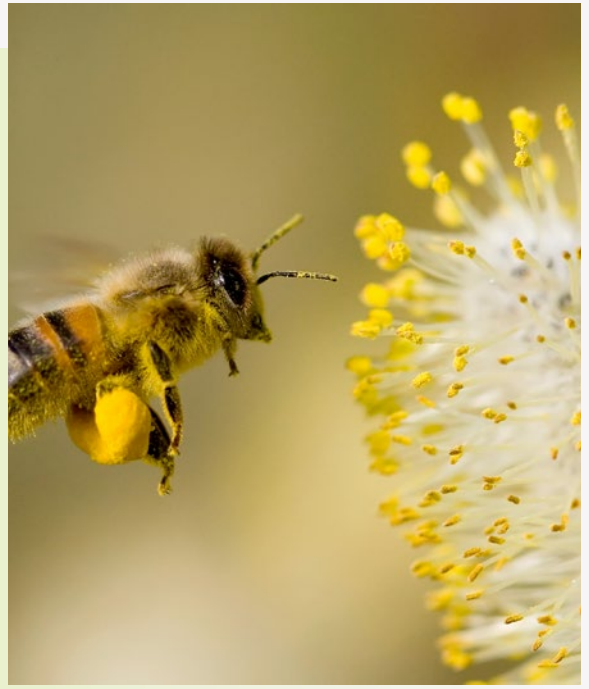
Other efforts focused on building the local infrastructure needed to divert waste that would otherwise go to landfill. In FY25, Microsoft's Fargo, North Dakota, campus needed a permanent local composting solution to divert organic waste, which accounted for one-third of its annual operational waste. We partnered with local company Prairie Composting to fund North Dakota's first food waste composting facility and acquire year-round composting equipment that can withstand Fargo's harsh winters. This diverted over 30% of our campus waste from landfills and established critical year-round composting infrastructure in North Dakota, creating new opportunities for local businesses and residents to cut landfill waste and curb methane emissions. Since rollout, the Fargo composting facility has expanded business to compost food waste for the local community, Starbucks, and Costco.

Letting bees lead our landscaping strategy

At Microsoft's Washington state headquarters, an urban beekeeping program supports approximately 250,000 honeybees—and is helping shape how we design campus landscapes.

Environmental DNA (eDNA) analysis shows our honeybees pollinate more than 150 floral species across 47 square miles, from plums and cherries to peaches and apricots. The harvested honey is shared with staff and used in campus dining. Beyond the Puget Sound, we also maintain bee colonies at campuses elsewhere in the United States as well as in Denmark and Germany.

Guided by eDNA insights from our beekeeping program, our headquarters landscaping strategy continues to center on native and pollinator-friendly plants. In 2025, the landscaping team partnered with a local compost service provider to transform an estimated 3,000 cubic yards of leaf debris into compost and convert trees naturally downed in a storm into over 600 cubic yards of wood chips, which we reapply to native plant zones.



Investing where we live and work: Washington state

Washington state is Microsoft's home. Since 1979, we have built a presence that extends from our headquarters in Redmond, with Mount Rainier on the horizon, to datacenter communities in Central Washington's agricultural basin and forest restoration efforts on the Olympic Peninsula.

We are committed to being a good neighbor and investing in the communities, natural resources, and ecosystems that define the place we call home.

Supporting communities across Washington

Our sustainability work in Washington is part of a broader commitment to the systems that help the state thrive—from housing and infrastructure to education, energy, and community institutions.

Since 2019, Microsoft has invested $750 million in affordable housing, contributing to the creation or preservation of more than 16,500 units. We have also contributed over $400 million to regional infrastructure and growth initiatives, including the East Link light rail extension across Lake Washington in 2026.

This work also extends through our employees and nonprofit partners. In 2025, Microsoft and our employees contributed more than $88 million to Washington-based nonprofits, volunteered over 400,000 hours, and contributed more than $50 million in technology to nonprofits across the state.

20 years of growing with Quincy

Microsoft broke ground in Quincy 20 years ago, designing and building the first company-owned datacenter, something local leaders had never seen but were proud to be part of. As a farming community in the heart of Washington state's agricultural basin, Quincy was never meant to be a tech town.

Now, on the edge of Quincy, two Microsoft campuses hold more than 20 buildings and 2 million square feet of computing power that millions rely on every day.

$88M+

contributed by Microsoft and its employees to Washington-based nonprofits in 2025.

Investing where we live and work: Washington state continued

Grant County's population has grown by almost 33% over the last two decades, and Quincy's poverty rate was cut in half between 2012 and 2023, falling from 29.4% to 13.1%. Property tax rates for residents have dropped, even as a stronger tax base helped fund community necessities like a new hospital, new city hall, new library, new high school, and new public safety stations that anchor the community.

Microsoft's datacenter operations in Central Washington employ about 400 people today, and that number is expected to climb to nearly 700 full-time employees and contractors by the end of 2026. Another 200 security contractors work alongside them. The average datacenter job pays roughly $93,000 a year, compared to the average $53,000 across the region, and onsite contractor roles pay about 1.7 times the regional average.

We have committed over $100 million to investees and partners across Washington.

To find talent for those careers, Quincy introduced the state's first high school datacenter technician program, with Microsoft's support, alongside expanded computer science and cybersecurity courses. Partnerships with Big Bend Community College and the NCW Tech Alliance and the NCW Tech Alliance have enabled local classrooms to keep young people close to home.

As Quincy's economic opportunities and resources continue to grow, so does what's possible for neighboring towns, as new campuses are planned for nearby East Wenatchee and Malaga. What started as a single datacenter is still evolving—creating opportunities, supporting jobs, and helping support the next chapter of Central Washington.

Catalyzing innovation in the Pacific Northwest

Microsoft and our partners are helping test, scale, and commercialize sustainability solutions in Washington with potential relevance far beyond the state. Through CIF and our Sustainable Markets programs, Microsoft has committed more than $100 million to investees and partners across Washington working to advance SAF, cleaner energy, climate-smart forestry, carbon removal, and other sustainability solutions.

In Moses Lake, CIF portfolio company Twelve is advancing power-to-liquid SAF production, with Microsoft among the customers connected to the project. In partnership with Pacific Northwest National Laboratory, Microsoft is applying AI and cloud computing to accelerate materials discovery for next-generation batteries—a critical technology for electrification and cleaner energy systems. Using Azure Quantum Elements, Microsoft helped screen more than 32 million candidate materials and narrow them to 18 promising candidates in 80 hours. And on the Olympic Peninsula, our work with EFM shows another kind of innovation: using improved forest management with the goal of supporting high-quality, nature-based carbon removal while also helping restore natural forest conditions, protect sensitive watersheds, and support biodiversity. Through this investment, we anticipate securing access to up to 3 million metric tons of carbon removal credits through 2035.

Planning for local resources as we grow

Growth in Central Washington also requires close partnership to help manage water and energy systems that support communities, agriculture, and datacenter operations alike. Microsoft joined with the City of Quincy to build the Quincy Water Reuse Utility, which treats cooling water from a Microsoft datacenter and recirculates it for reuse, helping reduce reliance on potable water in an arid region. Microsoft has also entered into a long-term agreement with Powerex to deliver carbon-free electricity to a new Microsoft datacenter in Washington state, matching hourly demand with direct deliveries of carbon-free hydro, solar, and wind power on a 24x7 basis. These partnerships are just a few examples of how Microsoft is working with local utilities and regional energy providers to help support growth and reduce pressure on local resources.

What Washington teaches us

Our investment in Washington state shows us what's possible with long-term, place-based investment. We are grateful to call this state home, and we will continue partnering, building, and learning alongside communities across Washington to support a more resilient future for people and the natural systems we all depend on.

Looking ahead

Reducing the resource intensity of our infrastructure

The work ahead will require continued progress across the full infrastructure system that supports Microsoft's products and services—from datacenters and campuses to supply chains, energy systems, and the communities where we operate. As demand for cloud and AI services grows, so does the need to reduce the resource intensity of that infrastructure while expanding the conditions that make more sustainable growth possible.

For Microsoft, that means focusing on several priorities:

- Improving how we design, build, and operate datacenters and campuses.
- Working with suppliers and partners to reduce impacts across the value chain.
- Expanding access to CFE and strengthening grid infrastructure.
- Supporting the technologies, markets, and local conditions needed to scale this work responsibly over time.

No single intervention will be enough. But by continuing to invest, collaborate, and adapt across these interconnected systems—and by being transparent about both progress and constraints—we can help build a more resilient, lower-emission infrastructure foundation for the AI era.

Products

In this section

Introduction	43
Software and platforms	44
Devices	48
XBOX	51
Logistics and supply chain	53
Applying AI for sustainability	56
Looking ahead	60

Advancing sustainability through our products

Microsoft products shape how people and organizations work, create, and play, which means what we build matters as much as how we build it. We're integrating sustainability into the experiences people rely on every day, from Microsoft 365 to Surface and XBOX.

We're also applying our own technology beyond our own operations with the goal of: strengthening water resilience, supporting ecosystem conservation, and making environmental and climate data more accessible to the researchers, governments, and organizations working to turn their insights into action.

What we build matters as much as how we build it.

Software and platforms

We're building products that help make sustainability more accessible and actionable for the people and organizations using them. Across cloud services, developer tools, and operating systems, we're building capabilities that empower customers to better understand and manage emissions, developers to create more efficient software, and users to reduce energy demand through everyday product features.

Improving energy efficiency through Windows

With Windows powering more than 1 billion active devices globally, even small improvements in energy efficiency add up. Windows 11 builds on a foundation of energy-efficient design, with features that help reduce power consumption during everyday use, extend battery life, and optimize system performance without compromising user experience. These capabilities support lower energy demand over the lifecycle of devices, complementing broader efforts to reduce Scope 3 emissions associated with use of the products we sell.

Energy Saver, our opt-in Windows feature, extends battery life and reduces device energy consumption by approximately 20% per active session. In FY25, we introduced Energy Saver as a configurable policy that IT teams can enforce in Microsoft Intune, Group Policy, or any Mobile Device Management tool, allowing them to deploy and manage it at scale across their device fleets. Previously a user-controlled setting, this expanded the feature from an individual user choice to an enterprise-wide capability.

Additionally, when Energy Saver is on, supported AI features automatically run in an energy-efficient mode. Together, these initiatives empower customers to lower their carbon footprint while maintaining a productive experience for their employees.

20%

reduction in device energy consumption with our opt-in Energy Saver Windows feature.

Software and platforms continued

Designing Copilot for efficient everyday use

Microsoft embeds Copilot directly into the tools people already use daily—like Outlook, Excel, PowerPoint, and Teams. That integration makes efficiency especially important: the systems that support Copilot are not isolated from the rest of our product portfolio; they are part of a shared AI and cloud foundation that supports experiences across Microsoft products. As we work to improve the efficiency of that foundation—from datacenter operations and hardware to model design—those improvements can help support more efficient Copilot experiences at scale. Recent Microsoft research found that optimized, large-scale AI inference can consume less than one watt-hour of energy per query, and that improvements across model design, serving systems, and hardware could reduce energy use by 8 to 20 times.

The opportunity is also visible in how Copilot changes everyday work. In one Microsoft experiment, five professionals were asked to summarize a 3,000-word technical report into 200 words, which took a median of 41 minutes and consumed an estimated 13.7 watt-hours of laptop energy. Using a single prompt, Copilot completed the same task in under a minute using 0.29 watt-hours of datacenter energy—roughly 55 times faster and 47 times more energy efficient. Independent reviewers also rated the Copilot-generated summary higher for clarity, accuracy, completeness, and overall quality. Results will vary by task, but the example shows why efficiency needs to be measured not only in the infrastructure behind AI, but also in the work AI helps people complete.

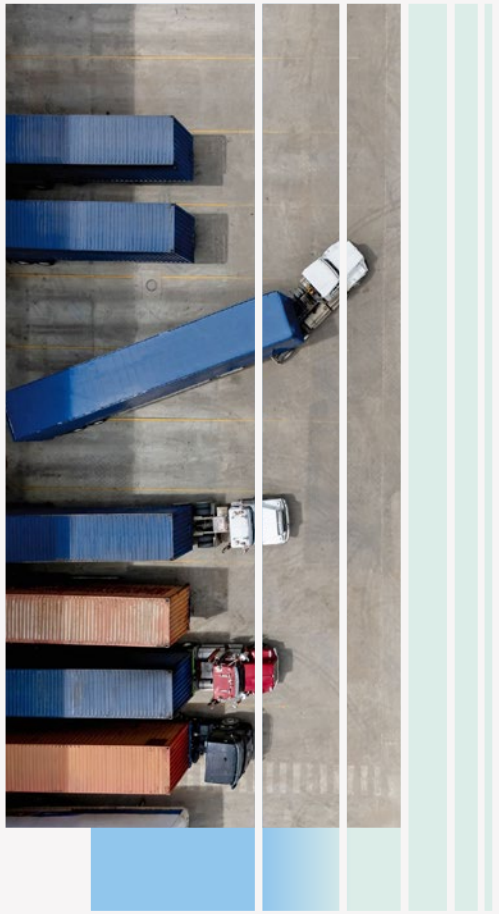
Helping organizations act on emissions data in Azure

Supporting customers on their decarbonization journeys begins with better data. That means giving organizations clearer visibility into the carbon impact of their cloud workloads, migration choices, operations, and supply chains.

In 2025, we announced the general availability of carbon optimization insights within Azure. This gives customers a detailed breakdown of the carbon emissions associated with their cloud workloads, helping them identify and analyze trends and take action to reduce impact.[28]

We also launched Sustainability Benefits in Azure Migrate, which helps customers estimate the potential emissions savings of moving workloads from on-premises infrastructure to Azure—where greater energy efficiency and carbon-free electricity (CFE)[3] can significantly reduce emissions. This helps give IT, finance, and sustainability teams a shared view of both commercial and environmental value when planning their cloud strategy.

For many organizations, managing sustainability data still starts with tools like Microsoft Excel. Microsoft Sustainability Manager offers a more integrated path—helping customers unify environmental, social, and governance data for tracking, reporting, and action.



Software and platforms continued

Built on Microsoft Dataverse and Microsoft Power Platform, Sustainability Manager delivers data integration, emissions tracking, and alignment with global standards. This helps our customers to easily calculate their carbon footprint across product lifecycle stages, allocate emissions from facilities and suppliers to specific products and organizational units, and combine social and governance data with environmental metrics for holistic assessments.

Oatly, a global leader in plant-based dairy alternatives, is committed to significantly reducing its environmental impact but recognized that its fragmented, manual approach to managing sustainability data was no longer sufficient. To address these challenges, Oatly partnered with Microsoft and PwC Sweden to centralize and streamline data, to improve transparency and traceability across its operations using Microsoft Sustainability Manager.[29]

Reliable, integrated data turns sustainability from a compliance exercise into real time business decisions and measurable impact.

Peter Tan
Vice President Business Technology, Oatly

Developers play an important role in reducing the environmental footprint of software by making design and engineering choices that can improve resource efficiency.

These tools are also helping extend better data and decision-making beyond customer use cases, including into supply chain reporting and supplier engagement.

We are using bespoke AI-enabled tools in Microsoft Sustainability Manager to help review carbon data submitted under our Supplier Code of Conduct reporting standards and identify ways to improve alignment. We also work with Green Project Technologies who built custom models in Microsoft Azure AI Foundry that automate carbon footprint calculations and help guide suppliers through decarbonization strategies.

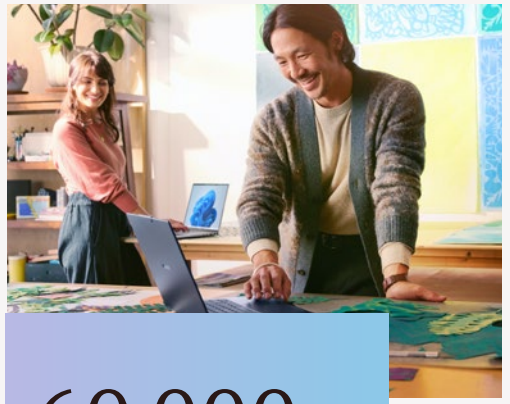
Equipping developers to build lower-impact code through GitHub

Software development increasingly shapes environmental impact—not just through the electricity required to run applications, but through the infrastructure those applications demand. Choices about code efficiency, model size, data volume, and workload design influence how much compute is needed, how long systems run, how much data is stored and moved, and when new hardware capacity is required. Developers therefore have an important role to play in reducing software's environmental footprint.

Through GitHub—Microsoft's open-source code-hosting platform—we're helping the world's largest developer community access tools, examples, and shared practices that can support more efficient code and accelerate climate and sustainability solutions.

Launched in 2025, the GitHub Climate Action Plan for Developers highlights examples from more than 60,000 open-source green software and climate-focused projects. This empowers users to reduce the climate impact of their own projects and includes a diverse range of tools that aim to help developers track the emissions of computing projects, access real-time electricity data and forecasts, contribute to open-source climate projects, and model energy demand in buildings and cities.

We're also exploring how emerging agentic AI capabilities can help developers work more efficiently and reduce the emissions intensity of new code. These capabilities can help developers choose the right-sized AI model for each task, while AI agents continually review, test, and improve code so it uses less energy when it runs. This work has already helped deliver efficiencies through Resolve, an open source AI tool that streamlines the development of complex applications by reducing the need to extensively configure tools, libraries, and frameworks.



60,000+

open-source green software and climate-focused projects launched on GitHub in 2025.

Software and platforms continued

Empowering developers to design more sustainable AI workloads in Azure

The Microsoft Azure Well-Architected Framework is a set of best practices and guidelines designed to help developers apply sustainability principles across three phases of AI workload design:

- **Model design**—prioritize smaller or pretrained models, energy-efficient frameworks, fine-tuned training instead of full training, and training in low-carbon regions.
- **Data design**—reduce the volume of data collected, improve data quality, use optimized ingestion methods, store and process data close to where it's needed, and choose regions and storage strategies that minimize environmental impact.
- **Operations**—deploy and scale workloads in low-carbon regions, retrain models only when necessary, monitor for performance and sustainability, and use autoscaling and load balancing to match resources to demand efficiently.

Together, these strategies strive to help Microsoft and our customers lower energy use, reduce emissions, and support the effectiveness of Azure systems that are both effective and environmentally responsible.

Devices

A device's sustainability starts long before it reaches a customer—in the materials we choose, how it is manufactured, and how it moves through the supply chain. It continues in the customer experience: how long the product lasts, how easily it can be repaired, and how responsibly it is packaged. We're building sustainability into every stage of the device journey, from design and sourcing to use and serviceability.

Reducing plastic packaging

Designing for circularity is central to our packaging strategy. Our targets have been simple yet ambitious: eliminate single-use plastics and design 100% recyclable packaging.

At the end of 2025, we eliminated nearly all single-use plastic from Microsoft's primary product packaging,[4] reducing single-use plastics to 0.07% across our global portfolio. This accomplishment reflects more than five years of innovation to reduce plastic packaging at scale without compromising quality, accessibility, or customer experience. It accounts for 1,000 unique packaging components spanning small break-the-seal labels all the way to the foam cushioning used to protect Surface Studio 2+, an all-in-one desktop PC that weighs over 21 pounds.

Since 2020, shifting to fiber-based materials has prevented more than 5,000 metric tons of plastic from being manufactured. That's equivalent to the weight of a half-billion plastic water bottles.[30]

At the end of 2025, we also achieved 99.0% packaging recyclability by implementing a paper-first approach that replaces plastics with renewable fiber-based materials.

We're proud of the strides we've made in our device packaging sustainability targets, but we are staying accountable to the work required to achieve them completely. Rather than rounding down to 0% single-use plastics, we remain committed to reporting our progress transparently and partnering with others to address the industry challenges needed to close the gap.

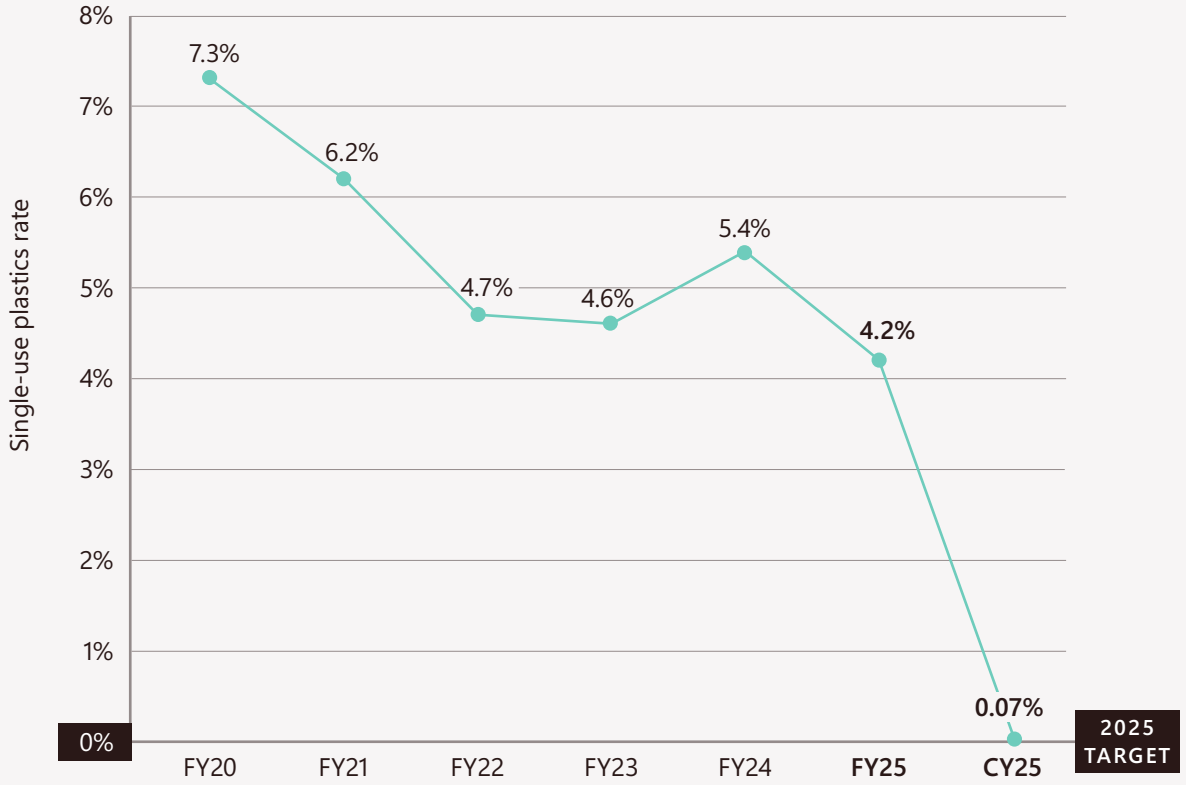
We're building sustainability into both the invisible decisions and the visible experience of our devices.

Devices continued

Reducing single-use plastics

In FY25, we achieved a rate of 4.2% single-use plastics across Microsoft primary product packaging. By the end of calendar year 2025, we had eliminated nearly all single-use plastics from Microsoft primary product packaging,[4] achieving a rate of 0.07%.

Find out more in our Data Fact Sheet



Increasing recycled and lower-carbon materials in devices

In 2025, we evolved our device circularity strategy to prioritize recycled content. We've continued to reduce the carbon intensity of key Surface components without compromising performance, including by prioritizing the use of lower-carbon materials such as post-consumer recycled plastics. By 2030, we aim for 25% of our devices' product content to come from recycled materials.[31]

We are also working to reduce our reliance on virgin materials by working with suppliers to integrate recycled inputs and verifying claims through UL 2809 certification. We have secured 100% recycled aluminum alloys in key enclosures; recycled copper and gold in printed circuit boards; recycled cobalt in batteries; recycled tin in solder paste; rare earth magnets from reclaimed electronics scrap; and post-consumer recycled plastics in key components and accessories.[32] Building on work from previous years, we rigorously evaluate and validate recycled materials before scaling their use, helping ensure product quality, compliance, traceability, and long-term reliability.

25%

of our devices' product content is expected to come from recycled materials by 2030.

Designing longer-lasting, more repairable devices

Extending product life reduces the need for replacement and the emissions associated with manufacturing new devices. In FY25, collaboration across design, engineering and sourcing helped us continue to improve durability across our Surface devices. We're also using modular architecture that make repairs easier, with spare parts available to customers and independent repair providers.

Devices continued

63%

recycled content used in the build of Windows 365 Link.

Device sustainability also means designing hardware for the way people work now, including cloud-based experiences that do not require every capability to live on the device itself. Microsoft is advancing this approach through new, purpose-built hardware for cloud-based work. Windows 365 Link is a compact device that helps organizations deliver the Windows experience without relying on a full local desktop device. The product connects people directly to their Cloud PC so they can securely access apps and files without storing them locally. It is designed to make work easier to manage, faster to set up, and more secure—especially in shared or flexible work environments. Windows 365 Link is also built with sustainability in mind: it's ENERGY STAR-certified, contains at least 63% recycled content,[33] uses 100% paper-based packaging, and is designed to be long-lasting and repairable.

Partnering with suppliers to reduce manufacturing energy and waste

We are working in partnership with our suppliers to reduce energy demand in device manufacturing, lowering the embodied carbon of our devices. In 2025, we worked with 20 manufacturing suppliers to pilot a measurable energy efficiency program and identified 60 energy-saving opportunities across supplier manufacturing processes, utilities, and buildings. These efforts resulted in savings of 5 million kWh across our devices production footprint.

To strengthen waste reduction in our devices supply chain, we also introduced the Supplier Zero Waste program. This effort encourages our devices manufacturing suppliers to achieve ≥90% waste diversion from landfill and incineration, aligned with zero-waste-to-landfill principles and globally recognized standards such as UL 2799, a third-party validated zero waste standard. In FY25, 43 of our manufacturing suppliers achieved ≥90% waste diversion; 42 achieved UL 2799 Platinum certification and 1 achieved UL 2799 Gold certification.

Applying AI to better understand the impact of our products

Lifecycle assessment (LCA) helps identify where a product's environmental impacts occur in the supply chain—but it can be a complex, time-intensive, or imprecise process. We are using AI to accelerate sustainability insights for Surface devices and XBOX consoles by automating parts of the LCA process and improving the precision of carbon modeling.

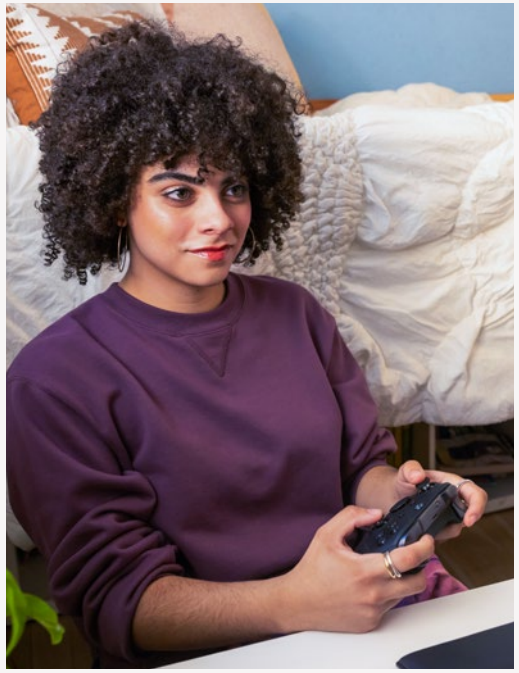
Machine learning is helping us create digital twins: dynamic, data-driven virtual models of a product's lifecycle. Unlike traditional, static LCA models, digital twins integrate materials, supplier, process, energy, and emissions data. These models allow us to simulate the environmental impacts from material extraction through to manufacturing, use, and end of life, helping identify inefficiencies and test new design and sourcing scenarios.

AI-driven tools such as Makersite have also reduced the time needed for LCA modeling by up to 80% per device. This helped us significantly expand coverage of our LCA analyses, which uncovered previously hidden hotspots like semiconductor manufacturing. These insights now guide supplier engagement according to carbon impact and inform strategies such as CFE adoption, ecodesign integration in product development, and improved sustainability reporting across Microsoft's device supply chains.

AI-driven tools have reduced the time needed for lifecycle assessment modeling by up to 80% per device.

XBOX

In 2025, we advanced gaming sustainability by reducing the energy footprint of XBOX devices across their lifecycle and using the games themselves to engage players in environmental action.



Reducing energy use without compromising gameplay

The XBOX Sustainability Hub is our central platform for sharing progress, tools, and resources with players, developers, and partners in the spirit of building a sustainable gaming future. Refreshed in 2025, the hub brings together updates on themes including energy-efficient design, recyclable packaging, and repairability.

It also gives developers access to the XBOX Sustainability Toolkit, launched in 2024 to help developers reduce energy use in games without compromising the player experience. Studios continue to embrace the toolkit: titles including The Outer Worlds 2, Indiana Jones and the Great Circle™, Two Point Museum, Minecraft, and Diablo IV implemented features such as Dynamic Power States, which adjusts power use in real time based on gameplay activity, and Constrained+ Mode, which lowers energy consumption when a game is not actively being played. Together, these features can cut energy use by as much as 50% without compromising player experience.

Energy savings also depend on the choices we build into the console experience. Energy Saver mode gives players a lower-power option—it uses 20 times less power than the previous standby option—without sacrificing convenience features such as background updates for your games, apps, and the OS. Adoption on XBOX consoles has remained above 70% since we launched the feature in 2022 and made it the default power mode in 2023. This shows how thoughtful design and player adoption can help reduce energy demand at scale.

Call of Duty®: Black Ops 6 won Best Green Tech Award at the 2025 Playing for the Planet Awards in recognition of leadership in sustainable gaming technology. The title was among the first to adopt Dynamic Power States along with energy-saving features in menus, showing that blockbuster gaming and sustainability can go hand in hand. These innovations were later extended to Call of Duty®: Warzone™.

20x

less power consumed by the console in Shutdown (Energy Saver) mode compared to Sleep mode when off.

XBOX continued

Engaging players on sustainability through gaming

Gaming can make sustainability more visible and accessible by meeting players in worlds they already care about. Through XBOX, Minecraft Education, and global partnerships, we're engaging players around the world with interactive experiences that combine entertainment with learning about environmental action.

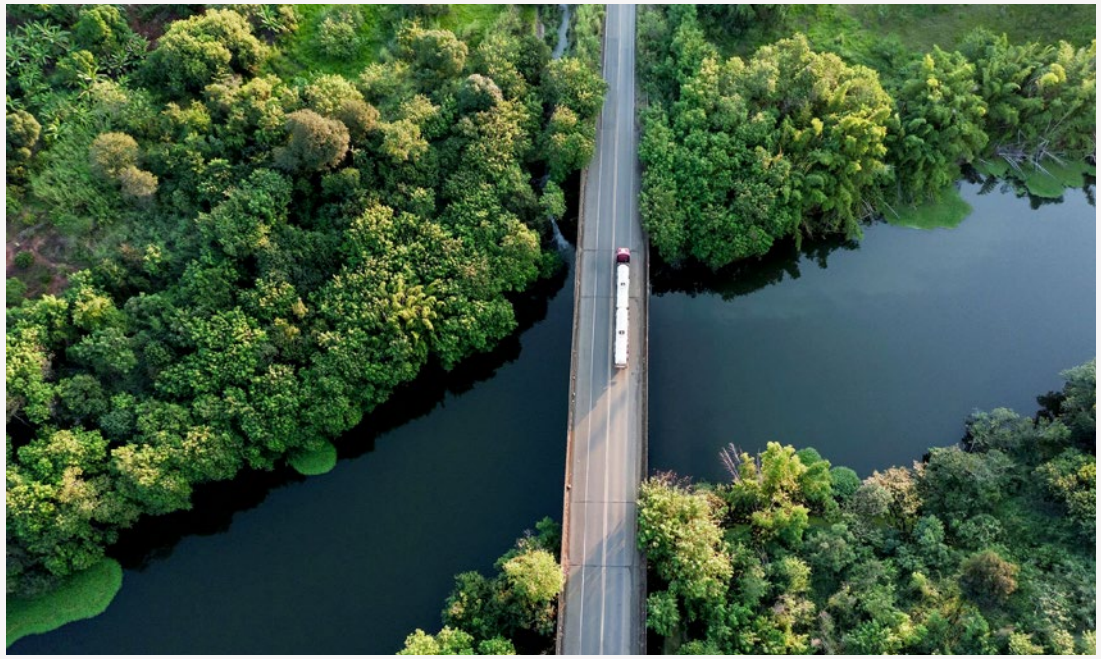
Created in 2025 for Minecraft Education in partnership with PBS Nature, Planet Pigeon brings urban ecology to life from a pigeon's-eye view. Through playful, immersive, science-based challenges, players explore how city wildlife adapts to human habitats and engage with issues such as food waste and coexistence with nature.

At Gamescom, XBOX partnered with Playing for the Planet, SEGA, and Bandai Namco Entertainment Europe on the Epix Quest. This interactive experience engaged players in fun, eco-themed challenges designed to raise awareness about environmental action within gaming communities.

Finally, we continue to spotlight games with the ability to inspire change through play. A curated collection of titles launched in 2025 is helping players discover games that embrace energy efficiency or sustainability themes while encouraging developers to continue innovation on sustainability.

Logistics and supply chain

Delivering Microsoft products and services depends on global supply chains and logistics networks that can be complex, carbon-intensive, and deeply interconnected. Reducing emissions across these systems requires action at multiple levels: improving the efficiency of our own logistics network, helping suppliers advance their decarbonization pathways, and working with partners to strengthen the infrastructure, energy systems, and markets needed to reduce value chain emissions at scale.



Reducing emissions in our logistics network

Reducing emissions from Microsoft's logistics network means finding lower-carbon alternatives for how we move products and materials—while maintaining cost, performance, and reliability.

In FY25, we increased the use of alternative fuels[34] across our transportation operations, helping to reduce emissions by more than 70,000 metric tons of carbon dioxide equivalents ($mtCO_2e$). That reduction is equivalent to avoiding the emissions from nearly 178 million miles driven by an average gasoline-powered passenger vehicle.[35]

We've also made progress in decarbonizing devices supply chain logistics. Using hydrotreated vegetable oil (HVO) fuel[36] for a portion of road freight helped save 33 $mtCO_2e$. Broader optimization efforts—including the adoption of lightweight recyclable pallets, changes to packaging configuration, and the continued use of electric vehicles (EVs)[37]—delivered a further 2,200 $mtCO_2e$ in savings.

Better data is also improving how we identify emissions reduction opportunities.

70,000 $mtCO_2e$

reduced through the increased use of alternative fuels across our transportation operations in FY25.

In FY25, we continued to expand the implementation of EcoTransIT, a software solution that calculates emissions at each stage of a shipment's journey. Using an ISO 14083 and GLEC-certified framework, it improves the accuracy of Microsoft's emissions measurements and gives us a clearer view of where reductions can be made across the network.

We are applying AI-enabled tools to logistics planning. CargoPilot, an internal AI-powered logistics agent for Microsoft's cloud supply chain, brings together complex logistics data and dynamic demand forecasting to simulate cost, carbon, and delivery speed trade-offs. It helps logistics teams identify opportunities to shift to lower-emission transport types and deploy alternative energy solutions—including sustainable aviation fuel (SAF), EV trucks, and HVO—without affecting service.

Logistics and supply chain continued

Helping suppliers decarbonize

Much of Microsoft's value chain emissions are shaped by decisions that suppliers make about energy, materials, and manufacturing. Many suppliers face real barriers to decarbonization—from accessing CFE and sustainable fuels to measuring emissions consistently and identifying where to focus. We are working to lower those barriers through clearer standards, better tools, stronger partnerships, and access to decarbonization solutions.

Over the past year, we strengthened how sustainability expectations are embedded in procurement tools, processes, and supplier relationships. We updated our Supplier Code of Conduct to request that suppliers purchase SAF for Microsoft-related travel where possible by 2030.

We also streamlined access to CFE for companies with smaller energy loads and revised our procurement policy to encourage buyers to engage with suppliers whose programs meet our sustainability criteria.

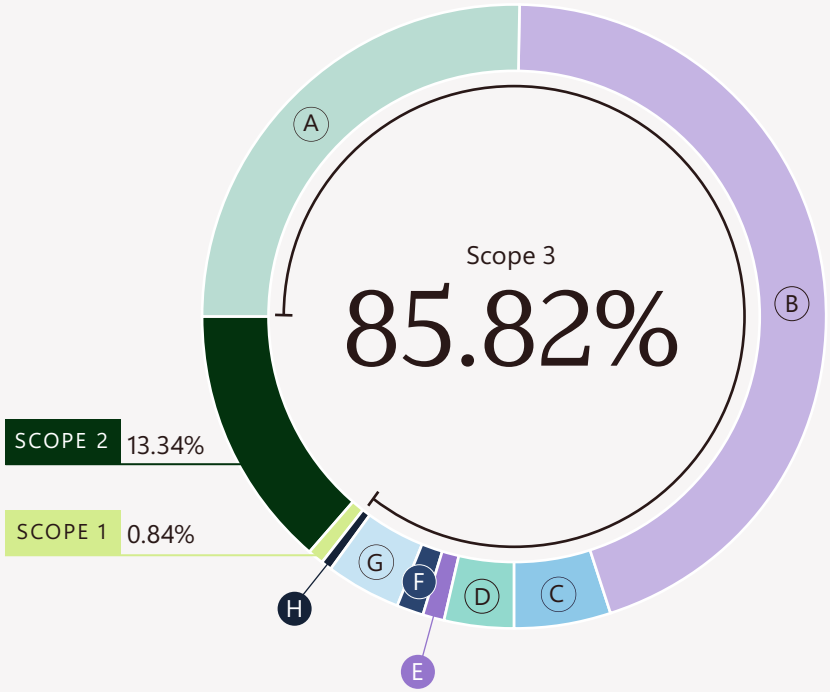
To help suppliers act on those expectations, we expanded access to practical tools and solutions that support emissions reduction. Our partnership with Zettawatts streamlined access to CFE and offered a fast-track procurement pathway for Microsoft suppliers with smaller electricity loads, aligned with our Supplier Code of Conduct guidance. We also continued to expand access to renewable energy procurement through our Supplier REach program, which helps suppliers evaluate energy purchasing opportunities based on factors including real-time pricing and availability. Through our partnership with software provider Chooose, we are using Microsoft's scale to help lower costs and improve access to SAF for our suppliers.

Alongside access to CFE and fuels, suppliers need better ways to understand and manage their emissions. We developed a streamlined approach to help service-based suppliers calculate greenhouse gas emissions based on the actual volume and type of services delivered. This gives supplier teams a clearer view of where emissions come from and where decarbonization opportunities may have the greatest impact.

FY25 Scope 3 emissions by source

Scope 3 emissions remain the largest share of Microsoft's total emission footprint. Advancing supply chain decarbonization and strengthening partnerships with suppliers will remain critical to managing impact as we scale.

Scope 3 categories	
A Purchased Goods and Services	25.28%
B Capital Goods	44.57%
C Fuel- and Energy-Related Activities (Market-Based)	5.30%
D Upstream Transportation and Distribution	3.66%
E Business Travel	1.00%
F Employee Commuting	1.40%
G Use of Sold Products	4.07%
H Waste Generated in Operations	0.07%
Downstream Transportation and Distribution	0.42%
End-of-Life Treatment of Sold Products	0.01%
Downstream Leased Assets	0.03%



Scope 2 and 3 emissions included in this chart are market-based.

Find out more in our Data Fact Sheet

Logistics and supply chain continued

Building the conditions for supply chain decarbonization

Reducing supply chain emissions requires changes to systems that no single company can drive on its own. SAF, for example, depends on stronger demand signals and greater available supply. Suppliers also need better access to CFE, clearer procurement pathways, and more reliable grid infrastructure. Microsoft is working across logistics, energy, policy, and industry associations to help strengthen these broader conditions for decarbonization.

As sustainable fuels become more important in our work toward our 2030 carbon negative commitment, we are using investment, procurement, and supply chain partnerships to help accelerate availability and adoption of SAF. One example is a multi-year partnership with AIT Worldwide Logistics and Cargolux that is expected to mitigate 66,000 $mtCO_2e$ between and Cargolux that is expected to mitigate 66,000 $mtCO_2e$ between 2025 and 2027 while also helping scale the market for regionally produced SAF.

We also worked with United Airlines and DSV, along with Phillips 66 as the SAF provider, on a cross-industry transaction expected to reduce lifecycle greenhouse gas emissions by approximately 100,000 metric tons compared with conventional jet fuel.[38] Partnerships like these send demand signals to the market, support policy momentum, and show how procurement can help scale SAF adoption in the North American aviation industry.

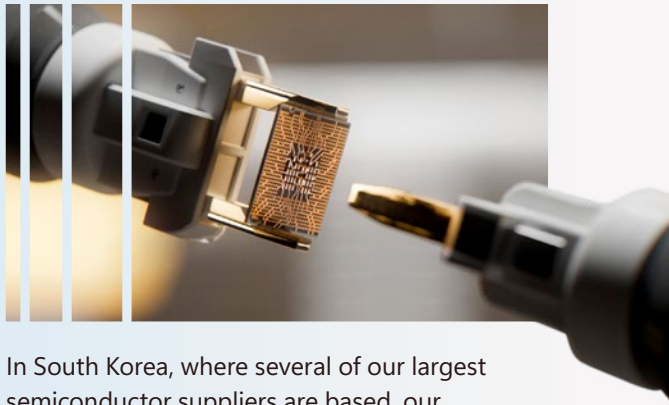
100,000 $mtCO_2e$

expected reduction in lifecycle greenhouse gas emissions through a sustainable aviation fuel transaction with United Airlines and DSV.

Addressing manufacturing emissions across our supply chain

The same principle applies beyond transport fuels. A significant share of our Scope 3 emissions is driven by semiconductors and hardware manufacturing, much of it concentrated among a relatively small number of suppliers in Asia. Reducing those emissions depends not only on supplier action, but also on better access to CFE in the markets where those suppliers operate.

To help address these challenges, Microsoft has significantly expanded its work across Asia-Pacific to support cleaner, more reliable, and more transparent energy systems for high-impact supply chains. We collaborate with governments, utilities, suppliers, and industry associations—including the Asia Clean Energy Coalition and the SEMI Energy Collaborative—to advance clean energy and grid solutions.



In South Korea, where several of our largest semiconductor suppliers are based, our engagement has focused on improving CFE access and accelerating grid and transmission development, including detailed industry input on key energy policies such as the 2025 Special Act for Key National Grids. Together, these efforts support Korea's evolving energy policy framework and the long-term decarbonization of its industrial base.

In Taiwan and Japan, we participated in policy dialogues on electricity market evolution, CFE procurement, and industrial decarbonization, including Japan's expanded renewable energy targets. We continue to work with suppliers, industry peers, and local stakeholders in both markets to support clearer corporate clean energy pathways, greater system transparency, and shared decarbonization roadmaps.

Applying AI for sustainability

As AI becomes embedded in how people and organizations work, it also creates new ways to analyze complex systems, surface insights from large datasets, and support faster decisions on environmental challenges. At Microsoft, we are applying these capabilities beyond our own operations—using AI to help strengthen water resilience, support ecosystem conservation, and improve access to environmental and climate data.

This work brings together Microsoft cloud and AI technologies with the expertise of researchers, nonprofits, businesses, and governments. Together, these collaborations help translate AI capabilities into practical tools for real-world sustainability challenges.

In FY25, nearly one in five of our water projects used AI to optimize outcomes, from detecting leaks to improving efficiency.

Harnessing AI for water resilience

We're harnessing AI technologies to help address some of the most pressing global water challenges by improving how water systems are monitored, managed, and maintained. In FY25, nearly one in five of our water projects used AI to optimize outcomes, from detecting leaks to improving efficiency.

We are also using AI to support water management at the basin scale. In partnership with the International Water Management Institute (IWMI), Microsoft developed Water Copilot, an AI assistant designed for the Limpopo River basin in South Africa. By combining Microsoft cloud and AI technologies with IWMI's digital twin of the basin's water cycle, the assistant delivers near-real-time insights to local decision makers' smartphones to enable more efficient irrigation monitoring, water-use tracking, multi-sector water demand analysis, and drought monitoring.

Applying AI for sustainability continued

At the urban infrastructure level, we are helping cities identify water losses and improve efficiency. Through AI-powered leak detection, sensor-based efficiency solutions, and modernized irrigation infrastructure, Microsoft is supporting efforts to conserve water at scale. Our partnership with FIDO Tech, for example, has supported 357 verified repairs and conserved more than 8.5 million cubic meters (m^3) of water so far—the equivalent of over 3,400 Olympic-sized pools.

We are also applying these tools at the community level. In Phoenix, Arizona, our AI acoustic leak detection is helping detect and repair hidden leaks in municipal water networks, preventing the loss of thousands of cubic meters of water each year. In Querétaro, Mexico, similar work conserved more than 760,000 m^3 in FY25 alone.

8.5+ million

cubic meters of water conserved in our partnership with FIDO Tech—the equivalent of over 3,400 Olympic-sized pools.

Supporting ecosystems conservation

Microsoft is applying AI to translate complex environmental and ecological data into actionable insights for conservation, forecasting, and response. Through our AI for Good Lab, we work with research institutes and nonprofits to develop tools that enable faster analysis and more targeted interventions.

In Yondó, Antioquia, Colombia, we developed an AI-powered mapping system for projects that incentivize forest protection and prevent emissions from deforestation and land-use change. Using Sentinel-2 satellite imagery and high-precision AI models with 92% accuracy, the system generates 10-meter-resolution maps that support transparent conservation practices and direct up to 85% of profits to local forest protectors.

In marine ecosystems, our AI for Good Lab partnered with the World Wildlife Fund (WWF) to launch GhostNetZero, an AI-powered platform to detect abandoned fishing gear that can trap and kill marine life. By analyzing underwater sonar scans with an approximately 90% detection rate, the platform can identify these "ghost nets" in minutes instead of hours, helping divers recover them more efficiently.

Scaling ecosystem monitoring

To protect ecosystems we need to see and understand them. This requires data not just where humans live, but in remote places where ecological systems often are thriving most—and are increasingly threatened by global environmental changes. To help close that gap, we are expanding access to biodiversity data through SPARROW, a solar-powered edge device developed by Microsoft that uses AI to monitor wildlife autonomously in some of the planet's most remote areas.

Combining acoustic and camera sensors with satellite connectivity, it sends real-time insights directly to the cloud, eliminating the need for manual data retrieval. Because the platform is open source, researchers can build and deploy their own devices, helping scale ecosystem monitoring and protection more broadly.

Applying AI for sustainability continued

Improving environmental forecasting and response

Microsoft is applying AI to help communities better anticipate environmental risks and respond when severe weather events occur. These capabilities can help support more timely decisions before, during, and after climate-related disruptions, from more accurate weather modeling to data-driven response planning.

As part of the European Centre for Medium-Range Weather Forecast's AI Weather Quest, Microsoft Research and MSN Weather developed MicroDuet, a weather forecasting model that improved predictive performance for temperature, precipitation, and pressure. Across forecast variables and horizons, the model outperformed government, academic, and industry forecasting systems worldwide.

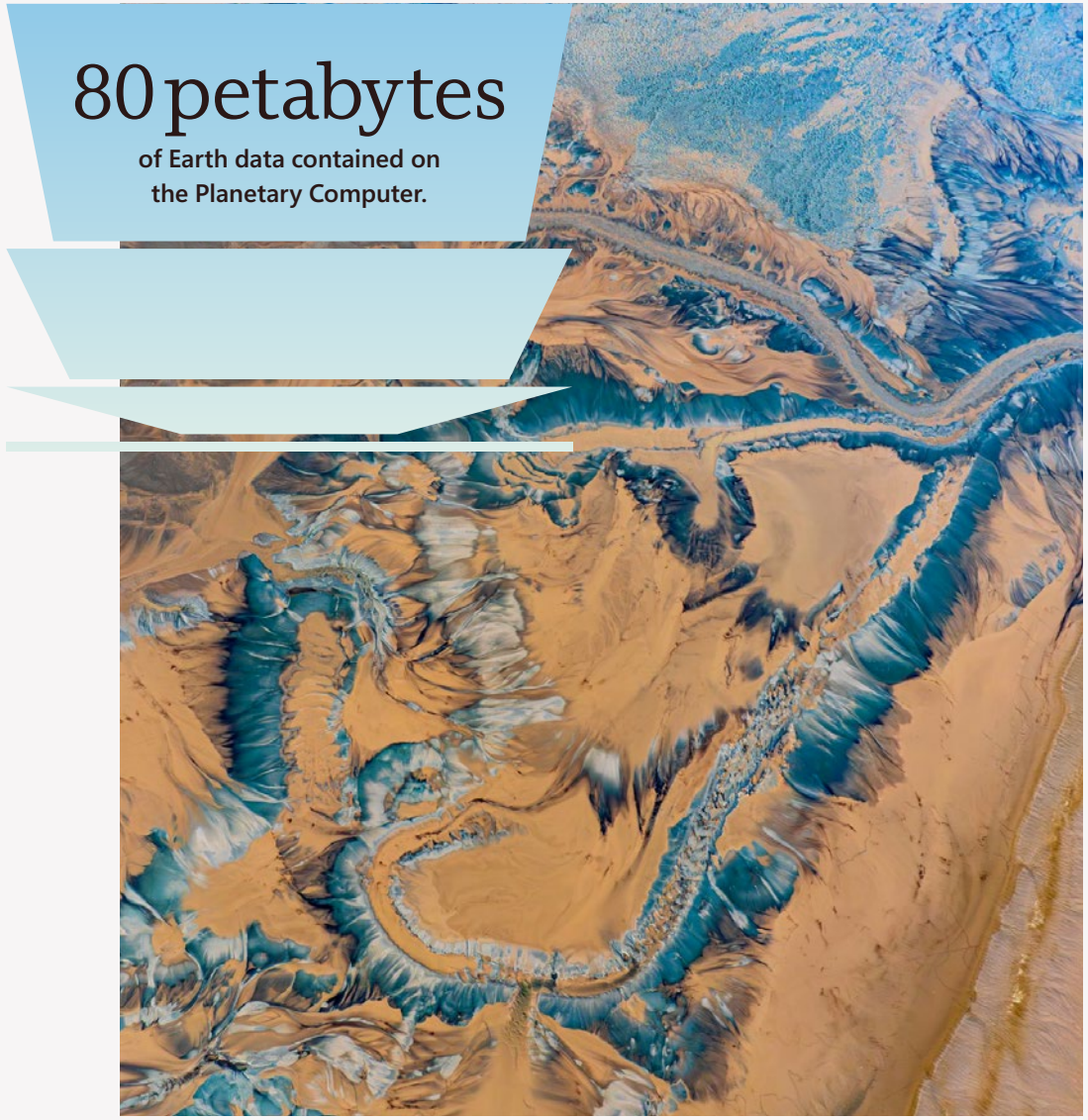
In eastern Pakistan, heavy monsoon rains caused some of the region's worst flooding in more than four decades, displacing millions and causing widespread damage to infrastructure, farmland, crops, and food supplies. To support the response efforts, Microsoft's AI for Good Lab used data from the Planetary Computer—our platform for Earth observation data, discussed further in the next section—to generate flood maps that helped identify areas at highest risk of food insecurity, enabling more targeted recovery efforts.

Expanding access to environmental and climate data

The challenge is often not a lack of information; it's making vast, complex datasets easier to find, understand, and use. Microsoft is helping lower those barriers through platforms and AI-enabled tools that make Earth observation, geospatial, climate, and energy data more transparent and useful for researchers, policymakers, organizations, and communities.

The Planetary Computer is central to this work. With more than 80 petabytes of Earth data from over 140 sources—the equivalent of roughly 40 trillion pages of standard printed text—it helps organizations measure, monitor, and model the physical world. In 2025, it was accessed an average of 24 billion times each month, reflecting its role as a global resource for environmental data.

These datasets are also reaching users through tools they already rely on. Esri's ArcGIS Living Atlas of the World integrates authoritative maps, apps, and data layers powered by analysis-ready imagery from the Planetary Computer, including the NASA Landsat and ESA Sentinel datasets. These resources provide insights across biodiversity, climate, urban planning, resource management, disaster response, and more. In 2025, we also launched Planetary Computer Pro, a ready-to-use platform that works with customers' existing IT infrastructure to help operationalize geospatial data with applied AI at scale.



Applying AI for sustainability continued

Lowering the technical barriers to information

To help democratize access to geospatial data, Microsoft made Planetary Explorer—an AI-powered solution accelerator—open source. Scientists and policymakers can build their own version in Azure and use natural language to discover, interpret, and analyze geospatial data from the Planetary Computer and NASA, without needing to write code. This lowers significant technical barriers to using complex environmental information in research, policy, and planning.

The same principle applies beyond Earth observation: complex climate and energy data often becomes more useful when it can be understood, compared, and acted on.

In partnership with the United Nations Framework Convention on Climate Change (UNFCCC) and EY, Microsoft helped develop the Climate Data Hub to support countries' reporting and review commitments under the Paris Climate Agreement. This AI-enabled platform consolidates climate data from more than 190 countries in one place and helps surface insight on progress, gaps, and where support is needed. Microsoft and EY showcased the platform at COP30 by demonstrating how AI-powered data tools can support more effective climate reporting and analysis at a global scale.

Energy data and analysis become most valuable when it moves beyond static reports into formats people can explore and apply more easily. Microsoft partnered with the International Energy Agency (IEA) to apply AI to global energy analysis, developing an AI agent on Azure using Copilot Studio to translate complex energy insights into a more accessible experience. Following the success of WEO-GPT, an Azure-based agent trained exclusively on the World Energy Outlook report and dataset, the IEA expanded this approach for its 2025 Special Report on Energy and AI and the 2025 World Energy Outlook. These AI agents make extensive analysis easier to understand, helping users find report-specific insights through a more intuitive experience.

Sharing guidance on AI and sustainability

The goal is not to apply AI indiscriminately, but to use it where it can help solve a specific problem better, faster, or at greater scale. At Microsoft, we believe AI has significant potential to help address sustainability challenges, and our work to reduce the impact of cloud and AI infrastructure is teaching us lessons we can share.

In 2025, we published Strategic Guide: Aligning AI Transformation with Sustainability Goals, which offers a practical roadmap to help companies bring AI and sustainability strategies closer together. The guide outlines five practices that help companies move from ambition to execution, from adopting a modern cloud strategy to selecting AI models that fit the mission.

We also co-produced a special report with the Veolia Institute on AI for Energy, Water, and Waste Management. Drawing on research and experiences from around the world, the report provides an interdisciplinary overview of how AI is being applied to help manage energy, water, and waste. It highlights real world case studies, from optimizing water treatment and improving building performance to supporting decarbonization efforts, while also identifying knowledge gaps as adoption scales. Organized like Microsoft's playbook on AI for sustainability, it examines both the opportunities and challenges of deploying AI at scale in the environmental services sector.

At Microsoft, we see responsible leadership as more than advancing our own work; it also means sharing what we learn as we reduce the impact of cloud and AI infrastructure and apply AI to support our sustainability strategy. We plan to continue contributing practical guidance, research, and examples to help other organizations identify where AI can be useful, understand the tradeoffs, and apply it to drive meaningful impact.

The goal is not to apply AI indiscriminately, but to use it where it can help solve a specific problem better, faster, or at greater scale.

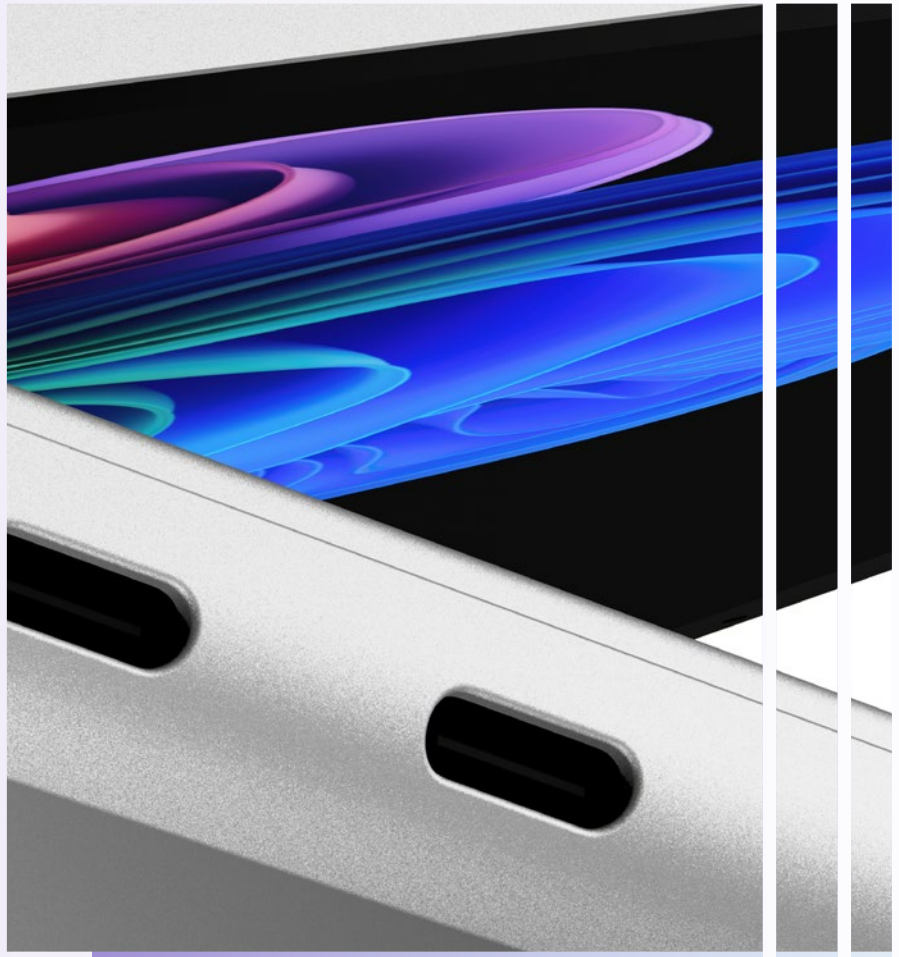
Looking ahead

We will continue working to build sustainability into our products

Products are one of the most direct ways Microsoft reaches customers, developers, players, and organizations around the world. We will continue working to build key sustainability principles into our products—starting with how they are designed and made, and extending to what customers can understand, manage, and improve through them.

That means continuing to reduce the resource and environmental impact of our own products across software, devices, packaging, logistics, and supply chains, while also strengthening the tools that help customers act on their sustainability priorities. It also means using Microsoft's cloud, AI, and data capabilities where they can help address specific challenges—from emissions measurement and low-impact software to water resilience, ecosystem conservation, and access to climate data.

As our products evolve, so does the opportunity to make sustainability more practical and visible in the places where people already work, build, and play. We will keep working to support progress toward Microsoft's own goals and to help customers, partners, and peers use technology in ways that aim to drive more sustainable outcomes.



Appendix

In this section

2025 progress at a glance	62
How we report	63
Endnotes	64

2025 progress at a glance

Across our commitment areas, we continued to make measurable progress in FY25 while laying the groundwork for long-term impact. For comprehensive environmental metrics, methodology, and historical data, see the Environmental Data Fact Sheet.

Carbon

Our commitment to become carbon negative by 2030 focuses on reducing emissions wherever possible and removing what remains. We advance this work by improving efficiency, increasing the availability of lower-carbon solutions, and accelerating adoption across our operations and value chain.

In 2025, we:

- **Achieved our goal of matching 100% of our annual global electricity consumption with renewable energy**, a significant milestone on our path to carbon negative.
- **Contributed more than 45 million metric tons of carbon removal**, adding 29 projects spanning five continents and 10 pathways.
- **Harvested more than 690 MW of power capacity** within existing datacenters, allowing more workloads to run without adding new infrastructure.
- **Expanded our renewable energy portfolio** to include agreements encompassing up to **40GW of new renewable energy across 26 countries**.

Water

Our commitment to become water positive by 2030 recognizes the essential role water plays in communities, ecosystems, and economic development. We advance this work by reducing water use, replenishing more water than we withdraw, expanding access to water and sanitation, and supporting innovation and policy that strengthen long-term water resilience.

In 2025, we:

- **Replenished more than 14.2 million cubic meters of water**, surpassing global water withdrawals for the first time.
- **Reduced global datacenter water usage effectiveness by 25%** from the 2022 baseline, progressing toward our 40% reduction target.
- **Funded 24 new water replenishment projects**, expected to provide more than 29 million cubic meters of benefit over their lifetime.
- **Designed new liquid cooling systems expected to avoid more than 125 million liters of water annually per datacenter**, reducing water demand while supporting AI growth.

Waste

Our commitment to become zero waste by 2030 aligns with the transition toward a circular economy. We advance this work by prioritizing waste prevention and circular design, then reusing and recovering materials to reduce waste, emissions, and resource consumption.

In 2025, we:

- **Diverted 90.5% of construction and demolition waste** from landfills and incinerators, exceeding target for the second consecutive year.
- **Eliminated nearly all single-use plastic in primary product packaging**, reducing the remaining share to just 0.07% across our portfolio.
- **Achieved a 92% reuse and recycling rate for decommissioned cloud hardware**, exceeding our 90% target for the second year in a row.
- **Diverted more than 9,000 metric tons of server-rack packaging waste** from landfills and incinerators.

Ecosystems

Our commitment to help preserve and restore the world's ecosystems focuses on applying data and digital technologies to support nature while protecting more land than we use. We advance this work through community-based restoration and conservation, nature-positive design, nature-based markets, and the use of data and AI to advance science, policy, and practice.

In 2025, we:

- **Achieved legal protection of 16,266 acres**—approximately 36% more than the estimated land area where Microsoft operates.
- **Expanded the Planetary Computer to more than 80 petabytes of environmental data from over 140 sources**, helping researchers, governments, and NGOs better understand and act on climate data.
- **Funded 30 ecological restoration projects in communities near our datacenters**, covering more than 600 acres and engaging over 9,000 community members in environmental programs.
- **Developed AI-powered forest conservation tools with 92% mapping accuracy**, helping direct conservation efforts and support local forest stewards.

How we report

Reporting principles and external standards

Microsoft works to conduct business in ways that are principled, transparent, and accountable. We annually publish this Environmental Sustainability Report to provide information on our strategy, our performance and progress against our goals, and key challenges and trends we see in this work. We also publish our environmental data, which is included in the separate Environmental Data Fact Sheet. We present greenhouse gas emissions in accordance with the GHG Protocol and management's criteria and select environmental metrics that both reference the Global Reporting Initiative (GRI) Standards and are reported in accordance with management's criteria as of and for the fiscal year ended June 30, 2025 (FY25). Microsoft's environmental data reporting covers global wholly owned and partially owned subsidiaries over which Microsoft has management and operational control, including Microsoft owned and leased real estate facilities and datacenters. Environmental data reported is subject to Microsoft's recalculation and structural changes policy as described in our Environmental Data Fact Sheet.

Our Reports Hub available at Microsoft.com/transparency provides a consolidated, comprehensive view of our environmental, social, and governance reporting and data ranging from our carbon footprint to workforce demographics to political donations. This Environmental Sustainability Report is an important part of that overall set of disclosures. For this and other reports, we inform our disclosure strategies with careful consideration of commonly used global standards. We have reported carbon emissions and energy data to CDP since 2004 and water data to CDP since 2011. On climate-related issues, we developed our latest report in reference to the International Financial Reporting Standards (IFRS) S2 Climate-related Disclosures standard, as issued by the International Sustainability Standards Board (ISSB), which builds on the structure and principles of the Task Force on Climate-related Financial Disclosures (TCFD).

Working together with stakeholders

We know that the decisions we make can affect our employees, customers, partners, shareholders, suppliers, and communities, and we take their voices into consideration. Microsoft receives input from millions of people each year—from individual customers to policymakers and global human rights specialists. We bring outside perspectives into the company and inform our business decisions through a variety of feedback channels. We often go beyond formal channels, proactively engaging with key stakeholders, advocacy groups, industry experts, corporate social responsibility (CSR) rating agencies, CSR-focused investors, and many others. We also share our learnings and practices, thereby generating industry dialogue, informing public debate, and advancing greater progress.

Corporate social responsibility (CSR) priority

Our CSR reporting describes the topics we consider to be the most important annually to stakeholders when evaluating environmental, social, and governance issues at Microsoft. Therefore, environmental, social, and governance prioritization in our reporting does not align to the concept of corporate "materiality" applied in US securities law. A listing of what we currently identify and categorize as our top environmental, social, and governance issues can be found at Microsoft.com/corporate-responsibility/sustainability.

Governance

The Environmental, Social, and Public Policy Committee of Microsoft's Board of Directors provides oversight and guidance on Microsoft's environmental sustainability strategy and efforts. Our Vice Chair and President and our Chief Sustainability Officer present to this committee on our overall sustainability agenda, including our climate-related work, and solicit high-level input on new and emerging initiatives. Additional information on Microsoft's corporate governance is available at Microsoft.com/investor.

Forward-looking statements

This report includes estimates, projections, and other "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, section 27A of the Securities Act of 1933, and section 21E of the Securities Exchange Act of 1934. These forward-looking statements generally are identified by the words "believe," "project," "expect," "anticipate," "estimate," "intend," "strategy," "future," "target," "efforts," "goal," "milestone," "tactic," "roadmap," "commitment," "opportunity," "plan," "may," "should," "will," "would," "will be," "will continue," "will likely result," and similar expressions. Forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties that may not be anticipated and/or which may cause actual results to differ significantly. We describe risks and uncertainties that could cause actual results and events to differ materially in our reports filed with the Securities and Exchange Commission. We undertake no obligation to update or revise publicly any forward-looking statements, whether because of new information, future events, or otherwise.

A number of our ESG goals may depend on the adoption of certain behaviors and/or activities by third parties, including our customers and partners. If those parties do not adopt certain behaviors or activities, or invest in certain evolving technologies, we may not be able to meet some goals. Additionally, we are engaged in certain projects, solutions, and technologies that, should they not perform as we expect, could negatively affect our ability to meet some ESG goals on time or at all. Finally, we make certain claims regarding our products and projects, including through our funding of certain projects, and the ability of those products, projects, and funding efforts to affect third parties' sustainability efforts; however, there can be no guarantee that our products, projects, or funding efforts will have the effects we anticipate or intend.

Endnotes

1. The solid line represents Microsoft's reported greenhouse gas emissions (Scopes 1, 2, and 3) for FY20–FY25, prepared in accordance with GHG Protocol and management's criteria, and uses a market-based emissions approach. The dotted line represents an illustrative counterfactual scenario of estimated emissions had select, discrete carbon reduction initiatives not been undertaken. These initiatives include energy efficiency improvements for XBOX consoles, renewable energy purchases, sustainable aviation fuel (SAF) and sustainable marine fuel (SMF) certificates, and supply-chain decarbonization of Surface devices. The difference between the two lines is an estimate of emissions avoided through these specific initiatives relative to a scenario without those initiatives occurring. This estimate is directional in nature, does not represent the full scope of Microsoft's decarbonization efforts, and is not part of our reported greenhouse gas inventory. It should not be interpreted as a comprehensive measure of total emissions reductions or as additive to other carbon reduction or removal claims.
2. Microsoft defines renewable energy as electricity that comes from sources that are replenished at a rate greater than or equal to their rate of depletion, such as geothermal, wind, solar, hydro, and biomass. To date, Microsoft's renewable energy target includes two primary categories: renewable energy from contracted projects and grid mix. The first is renewable energy delivered under PPAs or similar long-term contracting mechanisms, generally for new projects where our financial involvement in the project's development is critical for its success. This category represents more than 90% of the renewable energy applied to achieve our 2025 target. The second category is "grid mix" – renewable energy supported via our standard utility relationships and rates, inclusive of policy programs such as renewable portfolio standards and state and utility decarbonization goals. Our 2025 100% renewable target does not include purchases from short-term, so-called "spot market" renewable energy credits (RECs) sourced from operational clean energy projects.
3. Microsoft defines carbon-free electricity (CFE) technologies as technologies with zero direct emissions and biogenic technologies with lifecycle emissions equivalent to renewables. CFE technologies include wind; solar; geothermal; sustainable biomass; hydropower; nuclear; fossil fuels with complete carbon capture, utilization, and sequestration; and storage charged with CFE generation.
4. By weight, as designed, portfolio average. More details can be found in our Environmental Data Fact Sheet.
5. Embodied carbon refers to the greenhouse gas (GHG) emissions arising from the manufacturing, transportation, installation, maintenance, and disposal of building and infrastructure materials. Embodied carbon emissions are almost always Scope 3. Carbon Leadership Forum. Embodied Carbon 101. Accessed April 20, 2026. https://carbonleadershipforum.org/embodied-carbon-101-v2/
6. According to the US Environmental Protection Agency, an EPD discloses a product's key impacts on the environment (including the greenhouse gas emissions resulting from its manufacturing) and informs building product selection by designers and owners.
7. Zahabi, Nadia, Hongmei Gu, Meng Gong, and Janet Blackadar. "A Comparative Whole-Building Life Cycle Assessment of the Four Framing Systems of the Bakers Place Building Using the Tally LCA Tool." Buildings 15, no. 7 (2025): 1192. https://doi.org/10.3390/buildings15071192
8. World Economic Forum. "Sustainable Concrete Is Possible—Here Are 4 Examples". September 13, 2024. https://www.weforum.org/stories/2024/09/cement-production-sustainable-concrete-co2-emissions/
9. Cornwall, Warren. 2024. "Steel Industry Emissions Are a Big Contributor to Climate Change. Can It Go Green?" *Science*, May 3, 2024. https://www.science.org/content/article/steel-industry-emissions-big-contributor-climate-change-can-go-green
10. Lin et al., "Closed-loop optimization using machine learning for the accelerated design of sustainable cements incorporating algal biomatter." *Matter 8* (September 3, 2025): 102267.
11. An environmental attribute certificate is an instrument that certifies and communicates the environmental and/or climate-related attributes associated with commodities, activities or projects. https://files.sciencebasedtargets.org/production/files/SBTi-Glossary.pdf
12. Water usage effectiveness (WUE) is a key industry metric relating to the efficient and sustainable operations of our datacenters. WUE describes the ratio of the yearly amount of datacenter water use (for cooling and humidification) to energy use. As with power usage effectiveness (PUE), the lower the WUE, the better. Tracking and lowering WUE is a crucial aspect of our commitment to be water positive by 2030.
13. Microsoft defines water stress as the ability (or lack of ability) to meet human and ecological demand for fresh water in a given location, whether because of insufficient supply or inadequate quality.
14. Microsoft aligns to the GRI 303: Water and Effluents 2018 standard where water withdrawal is defined as the total amount of water taken from any source for use by the organization.
15. Microsoft aligns to the GRI 303: Water and Effluents 2018 standard where water consumption is defined as the total amount of water withdrawn by an organization minus the amount discharged back to the same source.
16. This volume was quantified by third parties across our replenishment project portfolio.
17. Our total number of replenishment projects fluctuates year to year, reflecting changes in conditions, opportunities, and community needs.
18. This was calculated by dividing the total replenishment volume by the volume held in one Olympic-sized swimming pool.
19. Gartner Awards, Gartner Power of the Profession Supply Chain Award Library, by Irina Kondrashov, Maria Nieradka, December 2025.

    Gartner and Power of the Profession are a trademark of Gartner, Inc. and/or its affiliates.

    Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

Endnotes continued

20. Microsoft defines circular content as materials or components made from recycled content, designed for reuse or that have been reused, or sourced from forests that are FSC certified for their sustainable management practices.
21. According to the International Energy Agency (IEA), e-fuels are synthetic fuels made from renewable hydrogen produced using renewable electricity. Examples include e-kerosene, e-methanol, and ammonia. E-fuels can help reduce greenhouse gas emissions in hard-to-electrify sectors such as aviation, shipping, and heavy industry.
22. Sustain Our Future Foundation is a national nonprofit that partners with corporations and renewable energy developers to strengthen the community impact of renewable energy projects.
23. According to the US Energy Information Administration (EIA), capacity factor measures how much electricity a generating unit actually produces compared to the maximum it could produce if it operated at full power continuously. A high-capacity factor means the asset generates electricity consistently over time and makes efficient use of its installed capacity.
24. This estimate is calculated based on the EPA estimate of the typical passenger vehicle averaging 22.8 miles per gallon with the average vehicle miles traveled as 10,917 miles per year.
25. Within our portfolio, it's common for three to four years to lapse from a developer's decision to proceed with a technology-based project and when they begin commercial operations—that is, when a project starts to result in actual carbon removal. Comparatively, tree growth, and thus carbon accumulation, begins immediately and then accelerates, with significant uptake typically occurring after four to six years under optimal conditions, such as tropical environments with 30 or more native species planted.
26. Microsoft defines measurement, monitoring, reporting, and verification (MMRV) protocols as standardized frameworks used to quantify, document, and independently verify carbon dioxide removals. In carbon removal applications, MMRV protocols define how removed carbon dioxide is quantified, how results are reported transparently, and how outcomes are verified by third parties to ensure removals are real, additional, durable, and accurately accounted for.
27. Biophilic design incorporates elements inspired by nature—such as natural materials, forms, patterns, and lighting—to improve occupant well-being and can reduce embodied carbon by using lower-impact, renewable, or responsibly sourced materials. University of the Built Environment. "What Is Biophilic Architecture? 15 Real-World Examples in the Built Environment." January 10, 2025. https://www.ube.ac.uk/whats-happening/articles/biophilia-examples-built-environment/
28. Analyses of these workloads and emissions relies on internally developed methodologies that are informed by the GHG Protocol and the continuously evolving scientific and technological global standards surrounding emissions assessment.
29. This information has been self-reported by the organization and has not been verified by Microsoft.
30. One plastic water bottle ≈ 10 g of plastic, 100 bottles ≈ 1 kg, 500,000,000 bottles ≈ 5,000 metric tons of plastic. The average plastic water bottle (single-use PET bottle) weighs about 9–12 grams for the most common size sold. Typical weights by bottle size 500 mL (16.9 oz) — ~8–10 grams. This is the most common "average" reference point. 330 mL (11 oz) — ~6–8 grams. 1 liter (33.8 oz) — ~18–22 grams. 1.5 liter — ~25–30 grams.
31. Devices product content covers the entire Surface and Gaming devices portfolio by mass.
32. Surface Pro 10 and Surface Pro (11th Edition) enclosure includes Bucket and Kickstand. 100% recycled aluminum alloy in Bucket and Kickstand. Surface Laptop 6 enclosure includes A Cover, C Cover, and D Bucket. 100% recycled aluminum alloy in A Cover. Surface Laptop (7th Edition) – 13.8 and 15-inch – enclosure includes A Cover, C Bucket, and D Cover. 100% recycled aluminum alloy in A Cover and C Bucket. 100% recycled rare earth metals in magnets. Based on validation performed by Underwriter Laboratories, Inc. using Environmental Claim Validation Procedure, UL 2809-2, Second Edition, November 7, 2023.
33. Based on validation performed by Underwriter Laboratories, Inc., using Environmental Claim Validation Procedure, UL 2809-2, Second Edition, June 20, 2024. The device has 90% post-consumer recycled plastics in its top enclosure, 90% post-consumer recycled aluminum alloy in its top shield, 100% pre-consumer recycled aluminum alloy in its bottom plate, and its motherboard contains 100% recycled copper and 100% recycled tin solder.
34. Alternative fuels include gaseous fuels such as hydrogen, natural gas, and propane; alcohols such as ethanol, methanol, and butanol; vegetable and waste-derived oils; and electricity. These fuels may be used in a dedicated system that burns a single fuel, or in a mixed system with other fuels including traditional gasoline or diesel, such as in hybrid-electric or flexible fuel vehicles. U.S. Environmental Protection Agency. "Alternative Fuels." Renewable Fuel Standard. Last modified March 30, 2026. https://www.epa.gov/renewable-fuel-standard/alternative-fuels
35. This estimate is calculated based on the EPA estimate of the typical passenger vehicle emitting 0.009 $mtCO_2e$ per gallon of gas.
36. HVO fuel, or hydrotreated vegetable oil, is a renewable diesel fuel made by processing plant-based oils, waste fats, or other renewable feedstocks with hydrogen to produce a fuel that is chemically similar to conventional diesel. https://www.sciencedirect.com/topics/engineering/hydrotreated-vegetable-oil
37. The use of EVs in outbound truckload lanes within 100 miles of our distribution facilities in North America.
38. Phillips 66 supplied 11 million gallons of SAF to United Airlines. Through a subsequent exchange of environmental attributes between United Airlines, DSV, and Microsoft, this SAF is expected to reduce lifecycle GHG emissions by about 100,000 metric tons.

Stay up to date on our progress

Learn more about our sustainability journey and sign up for news and updates.

2026 Microsoft Environmental Sustainability Report