



AWS is building a sustainable business in Virginia, partnering with local communities, and investing in the region's future

Our sustainability work includes enhancing energy efficiency, transitioning to carbon-free energy, reducing embodied carbon, using water responsibly, driving a circular economy, and enabling sustainability for customers.

At AWS, we focus on efficiency across all aspects of our infrastructure. We use industry-standard metrics to measure efficiency and seek the optimal balance of energy and water use.

For more information, visit the [AWS Cloud Sustainability webpage](#).

Efficiencies of Scale

Our scale allows us to achieve higher resource utilization and energy efficiency than the typical on-premises data center. A study released by Accenture and AWS estimates running optimized workloads on AWS’s infrastructure is up to **4.1 times more efficient than on-premises**.

For more information, visit the full report, “[How moving to the AWS cloud reduces carbon emissions](#).”

Key Sustainability Metrics

AWS US East (Northern Virginia)	2023	2024	2025
Average PUE	1.15	1.15	1.15
Average WUE (L/kWh)	---	0.12	0.06

Power Usage Effectiveness (PUE) and Water Usage Effectiveness (WUE), in liters per kilowatt-hour, for data centers operated by AWS between January 1 and December 31 of each year

Building a Sustainable Business

OVERVIEW

ENVIRONMENT

COMMUNITY

ECONOMIC IMPACT

Progress So Far

- **Amazon enables multiple utility-scale solar projects in Virginia** to bring new carbon-free energy to the grid, making Virginia one of the top states for Amazon renewable energy investment.
- **AWS enhanced 37 acres of undeveloped land on the IAD 100 Data Center campus** in Prince William County, Virginia with native plantings, pollinator habitat, and trails to increase biodiversity, support monarch butterflies and native bees, improve soil quality, and reduce carbon emissions from lawn maintenance.
- **Lasting community and ecological value:** The restored 37-acre habitat supports local pollinators critical to Virginia's agricultural economy, provides interpretive walking trails with benches for employee and community engagement, and demonstrates AWS's commitment to integrating native ecosystems into data center campuses — reducing ongoing carbon emissions from maintenance equipment rather than maintaining resource-intensive turf grass.

Scale of Carbon-Free Energy

In 2025, BloombergNEF again recognized Amazon as one of the world's leading corporate purchasers of carbon-free energy, in addition to building the largest carbon-free energy portfolio of any corporation globally.

We have invested in over 700 carbon-free energy projects in 28 countries, with the capacity to generate 40+ gigawatts of electricity.

Water Stewardship

Our Water Positive Commitment

In 2025, AWS withdrew 263,169,407 gallons (996,204,576 liters) of water in Virginia. We are committed to being water positive by 2030, meaning we will return more water to communities than we use in our direct operations. As of the end of 2025, we were 75% of the way towards this goal.

To learn more, see the [Amazon water spotlight page](#).

OVERVIEW

ENVIRONMENT

COMMUNITY

ECONOMIC IMPACT

Replenishment Projects

Amazon plans to replenish more than 630 million gallons of water per year in Virginia through three projects:

- **Virginia State Dairymen's Association & Virginia Tech (500M gal/year):** Amazon funds an initiative helping Virginia dairy producers quantify and reduce nutrient runoff into local waterways through feed optimization, fertilizer reduction, and improved manure management. Farms receive technical support from Virginia Tech and outcome-based payments tied to verified nitrogen reductions. The project protects the Potomac River and Chesapeake Bay watersheds, with implementation from 2026–2035.
- **Water Affordable Housing Water Efficiency with ION (45M gal/year):** Amazon funds improved leak detection across five multi-unit affordable housing properties in Northern Virginia. An AWS-hosted water management system provides property managers with data to eliminate leaks and conserve water. Implementation began in 2025 and runs through 2035.
- **Watershed Restoration with Stroud Water Research Center (88M gal/year):** An existing project restoring local watersheds that replenishes 88 million gallons annually.

Water Stewardship

Progress with Reclaimed Water Initiatives

Loudoun County: AWS first began using reclaimed water at data center sites in 2018, working directly with Loudoun Water to modify their permit to cover the use of reclaimed water in Direct Evaporative Cooling (DEC) systems, a first in Virginia. Today, reclaimed water is in use across 19 operational sites (of AWS's 22 total), including four where AWS supported and funded the expansion of Loudoun Water's reclaimed water infrastructure to bring service directly to those locations.

Spotsylvania County: AWS worked with Spotsylvania County officials to develop a framework enabling reclaimed water for data center cooling, representing one of the largest investments in reclaimed water infrastructure by AWS. AWS is expected to be the first data center operator to use reclaimed water for cooling in Spotsylvania County. Once fully operational, all sites across all five campuses are expected to operate using reclaimed water.

Stafford County: AWS is working with Stafford County to upgrade its wastewater treatment plant to produce reclaimed water that will meet applicable reuse standards. AWS is funding both the treatment plant upgrades and the pipeline extension to AWS locations in the County. AWS is expected to be the first data center operator to use reclaimed water for cooling in Stafford County, and once fully operational, all sites are expected to run on reclaimed water, preserving potable water for community use.

OVERVIEW

ENVIRONMENT

COMMUNITY

ECONOMIC IMPACT

Reclaimed Water for Cooling

As of 2024, AWS led the top data center operators with the most locations using reclaimed water for cooling, with 24 operational locations, as detailed in a report by Koomey Analytics. By the end of 2025, that number had grown to 26 operational locations, with contracts in place to expand reclaimed water use to more than 130 locations across nine jurisdictions.

Of the 130 contracted sites, 78 of them will be in Virginia (38 in Spotsylvania County, 21 in Stafford, and 19 already in place in Loudoun County).



Community Impact

Northern Virginia is a key focus area given the scale of data center operations in the region.

Prince William County, Virginia: Amazon collaborated with Prince William County Parks & Recreation and nonprofit KABOOM! to build a 7,500-square-foot, kid-designed play space at Fairmont Park for families in Manassas, Virginia.

AWS Skills Center Arlington: Three years of free cloud skills training for the HQ2 community.

"I'm expecting a baby soon, and the I2PA program will enable me to provide for my growing family. I also wanted to challenge gender assumptions and show that women are equally interested in pursuing careers in the skilled technical trades.": **Sarah Hidalgo**, student at Germanna Community College, Locust Grove, Virginia

"The I2W workshop opened my eyes to the innovative training initiatives AWS has launched to develop talent pipelines for these in-demand roles. We're excited to join forces and create more programs that connect our students to enriching career opportunities.": **Dr. Shashuna Gray**, VP of academic affairs and workforce development at Germanna Community College, Locust Grove, Virginia



Community Impact

"We are so grateful to Amazon for their generosity in helping us brighten the holidays for our East End residents. We see every day how hard our folks work and how much effort and love they invest in their families and community.": **George Davies**, executive director at Creating Foundations for Hope, Manassas, Virginia

"We are thrilled to see Amazon Web Services expand into rural Virginia with its planned data center campuses. The economic impact of AWS in the Commonwealth is transformational, and these world-class data centers will bring historic capital investment and high-quality, 21st-century jobs.": **Jason El Koubi**, president and CEO of the Virginia Economic Development Partnership (VEDP)

"This type of opportunity to create hundreds of high-quality jobs and significant investment in Louisa is why responsible economic growth is a priority for the county. We're proud to partner with AWS to expand their operations in a world with a growing demand for cloud computing infrastructure.": **Duane Adams**, Louisa County Board chairman, Louisa, Virginia



Investing in Virginia

\$190+ billion invested in Virginia since 2010, including infrastructure, and compensation to our employees

\$140+ billion contributed to Virginia's economy through Amazon's investments since 2010, boosting GDP

45,000+ full- and part-time employees

130,000+ indirect jobs supported in industries such as construction, logistics, and professional services—suppliers and partners who we rely on every day

\$170,000 average sales per independent seller with over 43 million items sold

Broader Economic Impact

Operational since 2006, this is AWS's oldest and largest region globally. Northern Virginia is the world's largest data center market, and AWS is one of the largest infrastructure investors in the region.

Amazon ranked #1 Investment Hero by the Progressive Policy Institute for the sixth consecutive year.

Our key investments in Virginia for the AWS Infrastructure Region include:

- \$119.1 billion investment in AI and cloud infrastructure
- 21 Amazon solar farms
- 5,000 Career Choice, Pathways, and Foundational Classes Participants since program inception
- 15 Career Choice partner institutions