

Impact Study

Georgia, US Data Center

2024



Google's Data Center Impact in Georgia

Google's data center in Georgia is helping to rapidly grow the digital economy. It is what you rely on to pull up a map to a new restaurant, attend online classes, or access your healthcare records.

Google's digital infrastructure investments in Georgia drive local economic development through job creation, promote environmental stewardship through carbon-free energy production, and foster thriving communities.

Google has invested in Georgia's digital infrastructure since 2003. This Impact Study provides a summary of key economic, environmental, and social metrics that Google's digital infrastructure investments have had on Georgia in recent years.

Economic

Google's investments in digital infrastructure in Georgia support jobs in construction, engineering, and the service industry. Google's data center contribution to labor income in Georgia is equal to supporting **~12,920 households in the state each year.**

~\$1,465M

Annual contribution to Georgia's GDP¹ (2021-2023)

~11,070

Annual jobs supported (2021-2023)

Environmental

As part of Google's commitment to operate all of its data centers using carbon-free energy by 2030, Google's partnership with Georgia Power brings **78.8 MW of solar energy to its Douglas County data center** - part of a first-of-a-kind program that allows companies to buy renewable energy directly from the utility.

42% (2023) | 40% (2022)

Percentage of electricity matched with carbon-free energy^{2,3} supply at every hour of every day at Google's data center in Georgia

Social

Google's community investments include support to the Douglas County School System's STEM⁴ program which helped empower 600 students, **generating a ~\$10 social benefit for every Google-invested dollar** and fostering a more digitally skilled future workforce in Georgia.

~\$2.9M

Invested in Georgia communities surrounding Google's data center in 2022 and 2023

This report provides a summary of Google's data center impact. The overall impact of all Google operations is significantly larger, encompassing contributions beyond data centers, including economic benefits from its platforms, products, and services used across various sectors.

Notes: 1. GDP stands for gross domestic product. 2. Google defines carbon-free energy (CFE) as any type of electricity generation that doesn't directly emit carbon dioxide, including (but not limited to) solar, wind, geothermal, hydropower, and nuclear. Sustainable biomass and carbon capture and storage (CCS) are special cases considered on a case-by-case basis, but are often also considered carbon free energy sources. 3. Google's CFE is influenced by various factors, such as overall electricity usage, purchases of carbon-free energy, technological advancements, and changes in the broader energy landscape. 4. STEM stands for science, technology, engineering, and mathematics.

Economic Impact: 2021-2023¹



~\$1,465M

Annual Contribution to Local GDP

Includes ~\$662M direct, ~\$402M indirect, and ~\$402M induced



~11,070

Annual Jobs Supported²

Includes ~2,095 direct jobs, ~5,270 indirect, and ~3,705 induced



~\$941M

Annual Labor Income

Includes ~\$321M direct, ~\$411M indirect, and ~\$209M induced

Google's contribution to **Georgia's GDP increased by ~25% between 2021 and 2023**, compared to the state's overall GDP growth of ~7% during the same period.

Google's data center contribution to direct, indirect, and induced labor income in Georgia is equal to supporting **~12,920 households in the state each year.**

Top GDP Contributions



Professional, scientific, and technical services³

(38% of Total GDP Contribution from Google's investments in Georgia)



Other (various sectors such as real estate and finance & insurance)

(62%)

Spotlight: Carbon-Free Energy

Google's investments in clean energy in Georgia have created...



~\$7M

Annual Contribution to Local GDP



30

Annual Jobs Supported



~\$3M

Annual Labor Income

Direct: includes Google employees and contractors (incl. their payroll and benefits) and annual spend on Google's suppliers

Indirect: includes Google's suppliers' employees and contractors, the suppliers' payroll and benefits due to Google orders, and suppliers spend

Induced: includes impact generated by the household spending of Google's employees and their suppliers in their local economies

Notes: 1. GDP and labor income rounded to the nearest one-million; Jobs and household numbers rounded to the nearest multiple of five. 2. Google's support to jobs includes construction, engineering, networking, renewable energy jobs, security, and services, among others. 3. Includes computer systems, data processing, software services, and other computer-related facility management support, etc.

Environmental Impact: 2022 & 2023^{1,2}

42% (2023) vs. 30% (2023 Regional Grid)

40% (2022) vs. 28% (2022 Regional Grid)

24/7 Carbon-Free Energy (CFE)

Google has matched 100% of its global annual electricity consumption with renewable energy purchases, and has further committed to operating at 24/7 CFE by 2030. This means matching electricity demand with CFE supply every hour of every day.

1.09 (2023)

1.09 (2022)

vs. 1.58 (industry average)

Avg. Power Usage Effectiveness

Compared to the industry average, Google's Georgia data center is achieving an 84% reduction in overhead power usage. For every watt of power used to run servers and network equipment, only 0.09 watts are used to run supporting infrastructure like cooling and lighting.

Spotlight: Carbon-Free Energy

To advance Google's 24/7 CFE commitment, Google announced a **first-of-its-kind program that allows companies to buy renewable energy through Georgia Power**, in partnership with Walmart, Target, and Johnson & Johnson.

This program enables the **construction of two new solar energy projects in Georgia**, with a total capacity of 177 MW. Google will receive **78.8 MW of solar energy** for its Douglas County data center.

"Our long-standing data center efficiency efforts are important because our data centers represent the vast majority of our direct electricity use. Google's [global] data center consumption was more than 24 TWh in 2023 which translates to approximately 7-10% of global data center electricity consumption."

- 2023 & 2024 Google Environmental Reports

345.6M Gal. (2023)

305.2M Gal. (2022)

Water Consumption

Google strives to protect water quality and ecosystem health in the communities where it operates, including Georgia.³ In fact, in 2023, over 90% of water withdrawn was from reclaimed wastewater sources.

Sustainability Spotlight

In its Douglas County data center, Google has partnered with the Douglas County Water and Sewer Authority to use reuse water to cool its facility – instead of relying on potable water¹. The data center has an on-site effluent treatment plant that **treats the water and returns it to the Chattahoochee – cleaner than when Google received it**.

Notes: 1. For more information on the environmental statistics, refer to the 2023 & 2024 Google Environmental Reports. 2. As applicable, the water consumption represents total water consumption across all data centers in the state; CFE and PUE are averages across data centers. 3. Google seeks to replenish 120% of the freshwater volume it consumes, on average, across its offices and data centers by 2030.

Social Impact: 2022 & 2023¹



~\$2.9M

Given to communities
in 2022 and 2023

*Surrounding Google's data center
in Georgia in addition to other
Google.Org programs²*



44

Organizations supported
in 2022 and 2023

*Focused on education, workforce,
and community development,
among other areas*



~\$10

Social benefit per
Google-invested dollar³

*Based on STEM educational
program⁴*

Google invested ~\$2.9M in Georgia communities, including:

Career Readiness

In 2023, Google provided \$40K to help Douglas County **upskill community members for positions in high-demand industries** through the Elevate Douglas Career Readiness and Training Program.

- The four-week program is **free to participants** and has employer partners across manufacturing, technology and data, and logistics industries.
- As Chris Pumphrey, President of Elevate Douglas, put it, *"At Elevate Douglas, we're working to cultivate a robust business environment, and a major piece of that plan is career readiness targeting in-demand industries in Douglas County. With Google's sponsorship, we'll be able to create more opportunities for people to go through our program."*

STEM Programming

Since 2019, Google has invested over \$330K in the Douglas County School System supporting diverse initiatives including **computer science education, robotics competitions, and resources for visually impaired individuals.**

- One of those programs, Douglas County's STEM Magnet program, **provided development opportunities for Douglas County teachers and administrators**, enriching the quality of STEM education for ~600 students, and generating the social benefit referenced above.

"Google's generous grant has empowered Douglas County students with the technological resources and educational opportunities needed to thrive in today's fast-paced digital world. For that, we are immensely grateful."

*- Trent North, Superintendent,
Douglas County School System*

Notes: 1. When applicable, numbers were rounded to the nearest thousand. 2. The amounts listed are in addition to other Google programs, like Grow with Google, Google.Org's Impact Challenge, and other initiatives. 3. This calculation is directional and represents Google's step toward understanding social value associated with its community investments. 4. Calculation based on the Douglas County's STEM Magnet program.

The Google Differentiator

Google recognizes that its data center operations and value chain can be engines of economic, environmental, and social progress. Google aims for its investments to catalyze positive spillover effects within Georgia.

Google thinks about its investments holistically.

Google recognizes that it can catalyze greater impact when it **looks at its economic, environmental, and social efforts collectively**, which is why Google's 2024 Impact Study in Georgia articulates Google's impact across these three domains. As Google considers its future strategy in Georgia, it will continue to look for opportunities to keep digital infrastructure secure and sustainable while driving local economic development, fostering thriving communities, and spurring environmental stewardship.

Google seeks to harness AI to drive innovation and accelerate climate action.

Google continues to invest in state-of-the-art infrastructure to **support its artificial intelligence (AI) efforts and rapidly grow the digital economy in Georgia**. However, Google recognizes that these benefits also come with increased energy usage and emissions and might have unintended consequences if not properly managed. As part of its AI for Sustainability strategy, Google is taking steps to use AI to **accelerate climate progress** and through its AI Opportunity Agenda, Google is providing recommendations for governments to **amplify the positive impacts** of AI for the broadest possible range of people.

Google seeks to engage directly with community members to advance and measure impact.

Google continues to work closely with community members in Georgia to understand its impact and refine its strategy. This report represents a **step toward measuring impact as Google moves from measuring inputs to measuring impact and value**. This includes Google's approximation of a "social return on investment", intended to estimate the social value created per Google-invested dollar based on educational empowerment and future job opportunities. Google will continue to find ways to **be more transparent and articulate its impact to local communities** across all dimensions.

Thank you!

To the many community members and Googlers who strive to make Google's ambitious economic, environmental, and social goals a reality.

For additional information or any questions please reach out to:



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DISCLAIMER: This Impact Study was prepared by Deloitte Consulting LLP ("Deloitte") for Google LLC ("Google") during Fall 2024. The purpose of the study is to assess the economic, environmental, and social impacts of Google's data centers modeled from the years of 2021-2023. The modeling, analysis, and results shown as part of the impact are based on information provided directly by Google LLC, publicly available information, and third-party information. Any revisions to those data will affect the assessments shown as part of the study. To calculate economic impacts, this study used an input-output model developed by IMPLAN. In preparing this study, Deloitte has, without independent verification, relied on the accuracy of information made available by Google.