Impact Study

Nebraska, US Data Center

2024

Google

Deloitte.

Google's Data Center Impact in Nebraska

Google's data centers in Nebraska are helping to rapidly grow the digital economy. They are 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 Nebraska drive local economic development through job creation, promote environmental stewardship through carbon-free energy production, and foster thriving communities.

Since 2019, Google has invested more than $3.5B in Nebraska's digital infrastructure. This Impact Study provides a summary of key economic, environmental, and social metrics that Google's digital infrastructure investments have had on Nebraska in recent years.

Economic

Google's investments in digital infrastructure in Nebraska support jobs in construction, engineering, and the service industry. Google's data center contribution to labor income in Nebraska is equal to supporting ~11,480 households in the state each year.

~$1,116M

Annual contribution to Nebraska's GDP[1] (2021-2023)

~13,305

Annual jobs supported (2021-2023)

Environmental

In Nebraska, Google partnered with the Omaha Public Power District (OPPD) to develop a procurement framework to supply carbon-free energy resources, including a 420 MW solar system and a 680 MWh battery energy storage system from the Pierce County Energy Center.

87% (2023) | 87% (2022)

Percentage of electricity matched with carbon-free energy[2,3] supply at every hour of every day at Google's data centers in Nebraska

Social

Google's Skilled Trades and Readiness program supported pre-employment training for nearly 50 students with underinvested backgrounds, fostering a diverse future workforce and more equitable economic growth in Nebraska.

~$1.3M

Invested in Nebraska communities surrounding Google's data centers 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.

Economic Impact: 2021-2023[1]

~$1,116M

Annual Contribution to Local GDP

Includes ~$651M direct, ~$175M indirect, and ~$290M induced

~13,305

Annual Jobs Supported[2]

Includes ~260 direct jobs, ~10,255 indirect, and ~2,790 induced

~$799M

Annual Labor Income

Includes ~$29M direct, ~$621M indirect, and ~$149M induced

Google's contribution to Nebraska's GDP increased by ~56% between 2021 and 2023, compared to the state's overall GDP growth of ~9% during the same period.

Google's data center contribution to direct, indirect, and induced labor income in Nebraska is equal to supporting ~11,480 households in the state each year.

Top GDP Contributions

Construction

(50% of Total GDP Contribution from Google's investments in Nebraska)

Other (various sectors such as professional, scientific, and technical services[3] and real estate)

(50%)

Spotlight: Small Business

Over 110K Nebraska businesses used Google's free tools for day-to-day business activities, from taking and receiving phone calls to making bookings to requesting directions!

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]

87% *(2023)* vs. 47% *(2023 Regional Grid)*
87% *(2022)* vs. 47% *(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)*
1.13 *(2022)*
vs. 1.58 *(industry average)*

Avg. Power Usage Effectiveness

Compared to the industry average, Google's Nebraska data centers are 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

Earlier this year, Google announced a new procurement framework with the Omaha Public Power District (OPPD) to supply capacity resources to OPPD and its customers. This includes the Pierce County Energy Center, a 420 MW solar system and a 680 MWh battery energy storage system in northeast Nebraska, expected to be available in 2027.

The Pierce County Energy Center is estimated to create 540 jobs during construction and $5.3 million in annual economic activity during the project's 20-year lifespan.

"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

134.7M Gal. *(2023)*
46.6M Gal. *(2022)*

Water Consumption

Google strives to protect water quality and ecosystem health in the communities where it operates, including Nebraska.[3]

Sustainability Spotlight

In partnership with the Twin Platte Natural Resources District (TPNRD), Google is providing funding that allows farmers to use Arable's technology, a mobile and web application that provides information like rainfall, wind speed, and soil moisture. This data will help optimize water usage for irrigation practices, while lowering carbon dioxide emissions from reduced electricity and diesel fuel.

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 & 2023[1]

~$1.3M

Given to communities in 2022 and 2023

Surrounding Google's data centers in Nebraska in addition to other Google.Org programs[2]

51

Organizations supported in 2022 and 2023

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

50

Underinvested students engaged

Based on career readiness program[3]

Google invested ~$1.3M in Nebraska communities, including:

Career Readiness

In 2024, Google's Skilled Trades and Readiness program invested nearly $462K to help upskill community members for positions in high demand industries.

- In partnership with the Metropolitan Community College, five cohorts comprising of almost 50 students with underinvested backgrounds participated in the five-week pre-employment training program.
- Often, students were offered employment with Google's data center contractors and trade partners upon completion.

STEM Programming

From 2019-2023, Google gave over $470K to support Papillion-La Vista Community Schools and Springfield Platteview Community Schools' programs including STEM education, skilled and technical trades, and technology upgrades.

"From supporting our Skilled and Technical Sciences learning model, to providing expanded learning opportunities and experiences for our students, we are grateful to count Google as a trusted partner since their arrival to Papillion in 2019."
- Dr. Andrew Rikli, Superintendent of Papillion-La Vista Community Schools

"Google's commitment to our school district has expanded both access to technology and learning opportunities for our students and growing community alike."
- Dr. Ryan Saunders, Springfield Platteview Community Schools Superintendent

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. Based on Google's Skilled Trades and Readiness program in Nebraska.

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 Nebraska.

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 Nebraska articulates Google's impact across these three domains. As Google considers its future strategy in Nebraska, 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 Nebraska. 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 Nebraska 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. 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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