

NUMBER 11-2026

CPP REPORT

May 2026



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Perceptions of AI and data centers: Impacts, concerns, and the water nexus

Texas is on the cusp of becoming the world's largest data center market, driven by an unprecedented wave of artificial intelligence (AI) and the greater Houston area sits at the center of this transformation. The scale and pace of this expansion raise profound questions about its consequences for residents: How do Houstonians perceive AI's economic, environmental, educational, and workforce impacts? Who do they believe should bear the costs of the energy infrastructure that powers these facilities? And how do these views intersect with the state's deepening water crisis — a challenge that data centers are now aggravating? This report explores these questions based on the SPACE City Panel latest wave.



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Key Takeaways

1. **Community concerns:** Houstonians value AI for its potential economic and educational benefits, but they are cautious about its effects on jobs and especially the environment. Overall, a majority (62.9%) oppose building data centers within one mile of their residences, listing increasing energy demand as one of the main reasons.
2. **Individual use of AI:** overall, respondents lean towards high AI usage (around 60% of overall usage intensity) with 31% reporting high use and 34% moderate use. Usage is particularly high for female, individuals aged 30–69, Black, and those who identify as other/2+ races.
3. **Energy costs:** regardless their party identification, respondents overwhelmingly think the tech sector should bear the cost of data centers energy requirements, not the public.
4. **The water nexus:** Water usage is the third reason why respondents oppose data centers being built within one mile of their residents, however 66.31% are not concerned about having access to water themselves.

Texas at the epicenter of the AI boom

The rapid expansion of artificial intelligence has set off a construction surge unlike anything the technology sector has previously witnessed. Fueled by the increasing computational demands of large language models, cloud platforms, and machine learning workloads, data centers have one of the most significant infrastructure expansions of the decade. National estimates suggest that this growth is reshaping electricity demand. U.S. data center electricity use remained relatively stable at about 50 terawatt-hours (TWh) between 2014 and 2016, but rose to 176 TWh by 2023, or 4.4% of total U.S. electricity consumption. By 2028, data centers could consume between 325 and 580 TWh, equivalent to 6.7% to 12% of total U.S. electricity consumption (Shehabi et al., 2024).

Within the United States, Texas is emerging as the primary hub of this expansion. The state currently has 6.5 gigawatts of data center capacity under construction — roughly one-fifth of the entire U.S. pipeline — and is expected to surpass Northern Virginia as the leading global market by 2030 (JLL, 2026). The U.S. Energy Information Administration also identifies higher electricity demand as being driven in part by data center growth concentrated in ERCOT and PJM Interconnection (PJM), with data center expansion especially important in Texas and Mid-Atlantic, respectively (U.S. Energy Information Administration, 2026).

The Electric Reliability Council of Texas projects that electricity demand could reach 218 gigawatts by 2031 — more than double the record 85.5 gigawatt peak set in August 2023 — with data centers accounting for an estimated 86 gigawatts of new demand (Martin, 2025; Skidmore, 2025). Key drivers of this concentration of investment in Texas include abundant land, low costs, access to natural gas, a business-friendly regulatory environment, and an independent grid that offers relative insulation from interstate transmission constraints.

Texas legislation is also changing rapidly. Almost 20 bills related to AI have been filled, addressing topics ranging

from the misuse of AI to protecting privacy (Texas 2036, 2025). In June 2025, Governor Greg Abbott signed the Texas Responsible Artificial Intelligence Governance Act (TRAIGA) into law, to enact comprehensive AI regulation. Effective January 1, 2026, TRAIGA establishes a set of categorical prohibitions on AI deployment and establishes the Texas Artificial Intelligence Advisory Council, to guide legislature on AI ethics, public safety, and regulatory reforms (Williamson, 2026).

The Greater Houston area is expected to absorb a significant share of the growth in data centers (Cook et al., 2026), making the region an important place to study how residents understand the AI and data center boom. The Greater Houston area sits at the center of Texas's energy boom, but it also faces growing questions about electricity affordability, infrastructure capacity, environmental impacts, and water resources. While the AI boom may create economic opportunities, including increased productivity, innovation, high-skilled employment, and the expansion of technology-intensive industries, it also imposes costs on households and communities that often have limited input in siting, incentives, and regulatory decisions.

This report presents findings from a new wave of the SPACE City Panel, a panel survey of representative of Greater Houston area residents. The report explores general attitudes toward AI and data centers, how communities are experiencing the local presence of data centers and related concerns, and patterns of personal use of AI. We then explore the questions of who should pay for the emerging AI electricity demands, and their concerns about the impact of AI and data centers on water use and availability.

AI and data centers

We begin by examining how Houston residents anticipate AI and data centers will shape Texas over the next five years across four distinct domains: the economy, the environment, education, and how people do their jobs. Figure 1 shows that Houstonians had mixed views about the growth of AI and data centers. Environmental concerns stand out

most clearly: 58.5% expect negative effects on the environment in Texas, compared with only 19.2% who expect positive effects. Views are more divided on the economy, education, and jobs. We find that Houstonians generally see AI as bringing potential economic and educational benefits, but they are more cautious about its effects on jobs and especially the environment. The results could suggest that people are still balancing expectations of innovation with concerns about social and environmental costs.

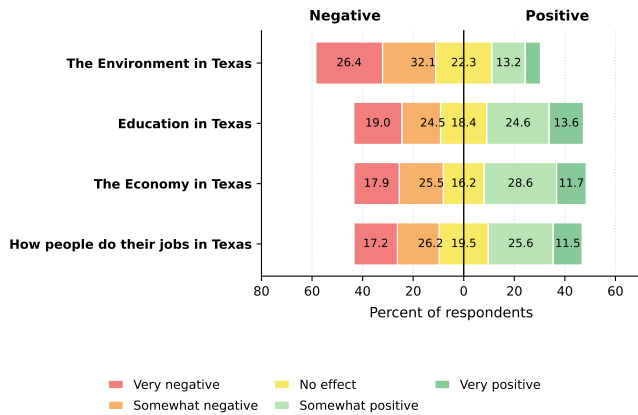


Figure 1 What impact do you think that growth of artificial intelligence (AI) and data centers will have on the following over the next five years?

Across all four categories, younger respondents rate the impact of AI more negatively, and views become increasingly positive with age. However, the largest gap in negative expectations between generations is for education (Figure 2). More than half of 18-29 year old (57.6%), expect AI to have a negative impact on education while those ages 45-59 and 60 and older are less negative (34.7% and 32.6%, respectively). The age group most likely to still be in the education system is the most pessimistic about AI’s impact. These findings align with other national reports showing Gen Z to be more skeptical of widespread AI adoption (Brenan, 2026).

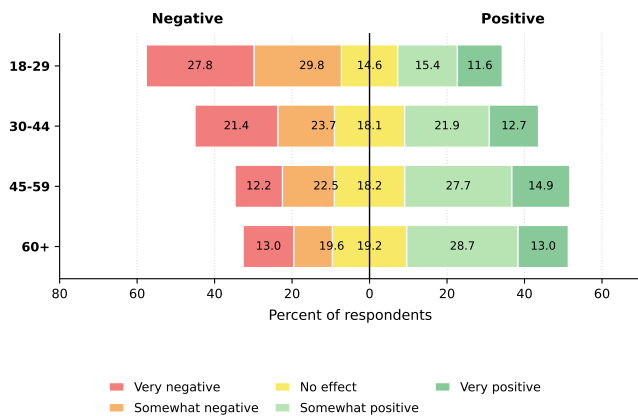


Figure 2 Impact on education by age

Community concerns

Community pushback is becoming a major constraint on data center development. According to Data Center Watch, local opposition blocked or delayed 20 data center projects in the second quarter of 2025 alone, affecting an estimated \$98 billion in potential investment (Data Center Watch, 2025). Against this broader national backdrop, it is important to understand how Houston residents evaluate the presence of data centers in their communities.

Focusing on potential concerns, we ask Houstonians whether they support or oppose a data center being built within 1 mile of where they live and, for those who oppose it, the reasons for their opposition, including noise, aesthetics, energy demand, and water usage. These responses allow us to gauge the specific concerns that could shape community attitudes and inform decision-making.

Figure 3 shows that opposition is widespread. Overall, a large majority (62.9%) oppose (strongly or somewhat) a data center being built within 1 mile of where they live, 24.5% support (strongly or somewhat), and 12.6% are unsure. We find a correlation by party identification: the highest opposition among Democrats (53% strongly oppose, 16.9% somewhat oppose, total 69.9%), and higher support among Republicans (20.8% somewhat support and 9.3% strongly support). Those without party affiliation lean more toward Republican positions while independents are more evenly split. Still, respondents are more opposed than supportive across partisan groups.

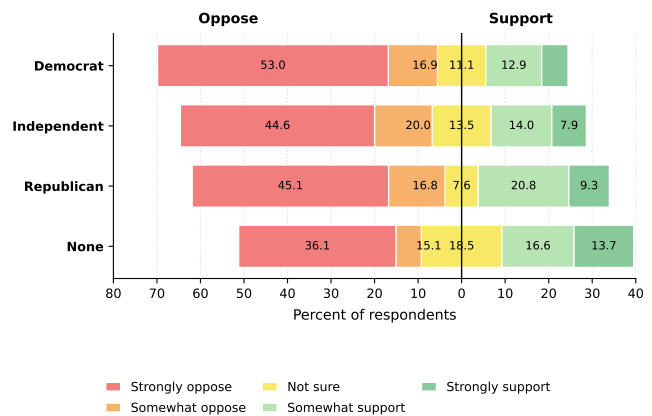


Figure 3 Support and opposition to data centers within 1 mile by party identification

To understand the position of those who oppose a data center being built within 1 mile, the survey also asks whether residents would be more or less supportive of a nearby data center if it were powered primarily by renewable energy rather than fossil fuels. This finding has direct implications for the role of clean energy commitments in building community license to operate. Among the 62.9% of respondents that said they opposed data centers being built within 1 mile

of where they live, 32.0% would be more supportive if the data centers were powered by renewable energy and 53.5% said it would make no difference. Few respondents (10.17%) said they would be less supportive.

Those who support data centers being built nearby are slightly more likely to report higher AI usage than those who oppose them. However, the differences are small.

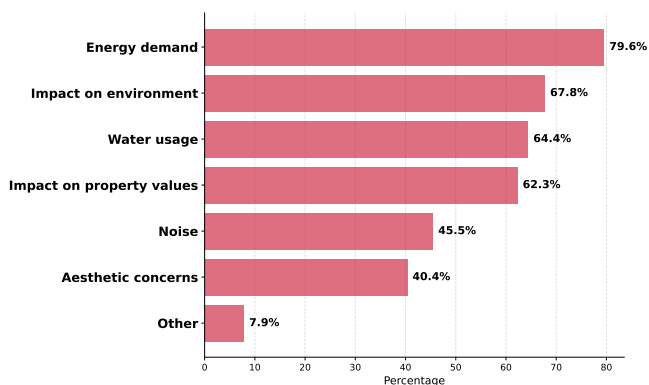


Figure 4 Why do you oppose a data center being built within 1 mile of where you live?

Figure 4 shows that energy demand is the leading reason for opposition, with 79.6% of the respondents selecting this option. The second most common reason for opposing data centers is their impact on the environment (67.8%), followed by water usage (64.4%) and impact on property values (62.3%). To a lesser extent, noise (45.5%) and aesthetics (40.4%) were also noted concerns about data centers among Greater Houston area residents.

Personal use of AI

We next examine how frequently respondents interact with AI in daily life. Our aim is to explore how usage frequency relates to attitudes about AI’s impacts. We asked respondents whether, in the past year, they used or interacted with AI several times a day, about once a day, several times a week, several times a month, a few times a year, or never. In Figure 7, we group responses by high use (several times a day/daily), moderate use (weekly/monthly), low use (few times per year), or no use. Houstonians lean toward high AI usage with 31% reporting high use and 34% reporting moderate use.

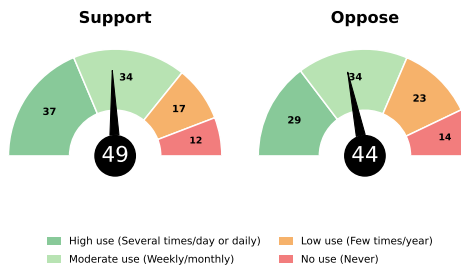


Figure 6 Usage and position against a data center being built within 1 mile

The survey finds that usage rates vary across demographic groups. Usage is higher among women and respondents ages 30-69. Black respondents and those who identify as another race or two or more races also have higher usage rates than Hispanic and white respondents.

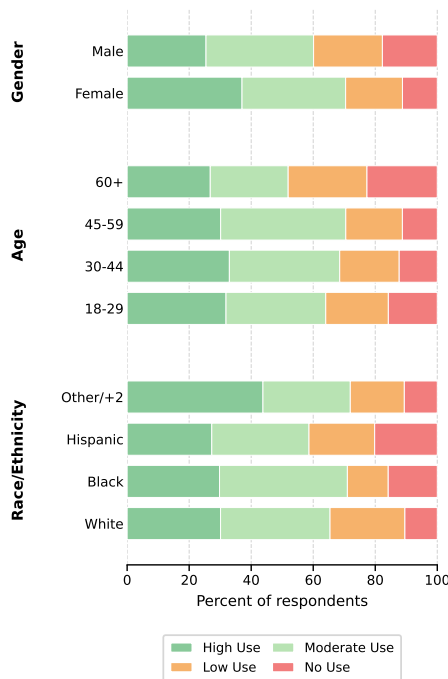


Figure 7 Usage by race/ethnicity, age, gender, party identification

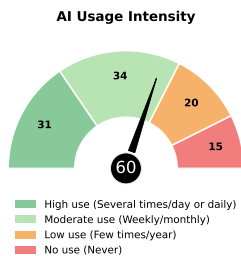


Figure 5 In the past year, how often did you use or interact with AI?

Who should cover energy costs?

Data center growth raises an important question: Who should pay for the new power plants and grid upgrades needed to meet rising electricity demand? This question is especially important in Texas, where population growth, extreme weather, and large new industrial loads are already

placing pressure on the grid. The previous Texas Trends report shows that households are already facing substantial electricity costs: The average monthly summer electricity bill is \$168, and nearly 45% of Texans pay more than \$200 per month (Buttorff et al., 2025).

Figure 8 shows that, regardless of party identification, respondents overwhelmingly believe data centers and technology companies should cover the cost of new power plants and grid upgrades, not the public. Support for passing these costs to households through higher electricity rates is very low across party groups. Democrats and independents are more open to government involvement, especially at the federal level, while Republicans are less supportive of public funding. Among the given options, passing costs to households is highly unpopular. Fewer than 5% of respondents across partisan groups think the costs of upgrades and new power plants should be passed on to households. The dominant view is that the tech sector should pay.

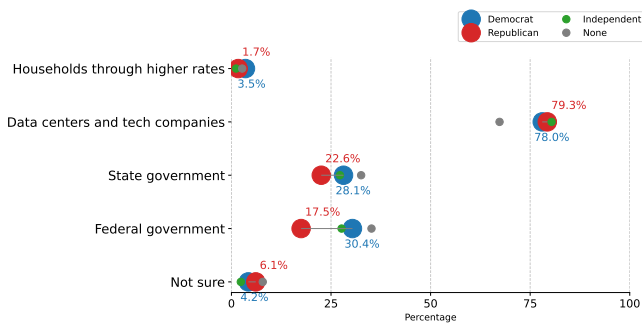


Figure 8 Who do you think should pay for new power plants and electric grid updates that data centers require?

These results are consistent with the fact that households are already having difficulties paying for their monthly electricity and natural gas bills. In our survey, nearly 47% of respondents report having difficulty paying their bills at least once in the last year (Figure 9). The SPACE City Panel team has already reported these increasing concerns (Buttorff et al., 2025; Pinto et al., 2025).

Difficulty paying for electricity or natural gas (past 12 months)

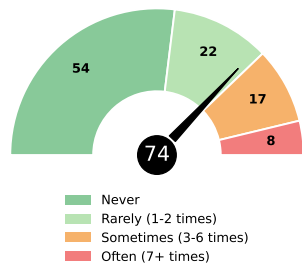


Figure 9 In the past 12 months, have you had difficulties paying your electricity or natural gas bills?

The water dimension

Finally, we examine the water dimension of this issue. Texas faces increasing water challenges driven by rapid population growth, aging infrastructure, recurring droughts, and increasing industrial demand, including demand from AI and data centers. The average data center uses approximately 300,000 gallons of water per day (Kane, 2025). Recent reports have highlighted concerns over the large amounts of water used by power plants and data centers across Texas, which increase pressure on already limited water resources (Houston Chronicle, 2026). State officials estimate Texas will need at least \$174 billion in water infrastructure investments over the next 50 years to avoid severe shortages (The Texas Tribune, 2026).

The survey asks residents to identify which actors they believe are most responsible for Texas' water resource challenges, report which water conservation behaviors they have already adopted, and indicate which additional conservation actions they would be willing to take. Together, these findings reflect how Houston residents understand the water-energy-AI nexus.

Although respondents identify water usage as a concern for Texas related to data centers as reflected in Figure 4, they do not regard water availability as their primary concern for the Houston area, suggesting that residents have not yet experienced strains on water supply or availability (Figure 10).

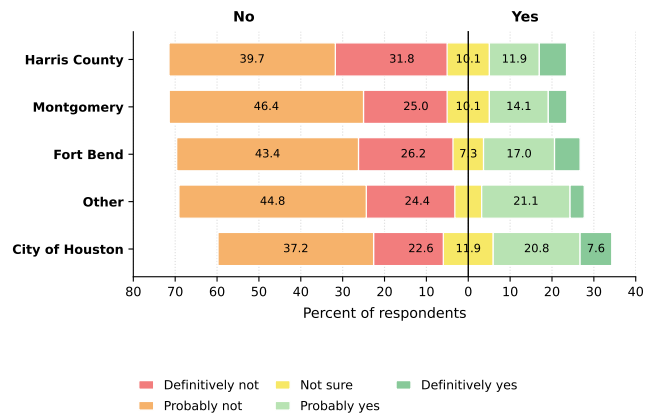


Figure 10 Do you regard water quantity (having enough water) as a problem in the area where you live?

In general, respondents do not appear particularly concerned about water availability. A majority (66.3%) report that having enough water is definitely not or probably not a problem in the area where they live, while 23.6% regard water quantity as definitely or probably a problem. Another 10% are unsure. Across the different regions shown in Figure 10, water quantity is not widely perceived as a major issue, but concern is higher in the City of Houston, suggesting urban-specific pressures such as infrastructure, population density, or awareness of future shortages. Suburban ar-

eas and counties outside Houston are less concerned, with Montgomery County being the least concerned.

Only 1.4% think there are no issues related to water, and from the remaining 98.6% who think there are water-related issues, 57.6% assign responsibility for the challenges related to water access to Texas regulators and broader Texas government. In second place, they blame water companies, followed by the oil and gas industry, AI and data centers, agriculture, and household consumption.

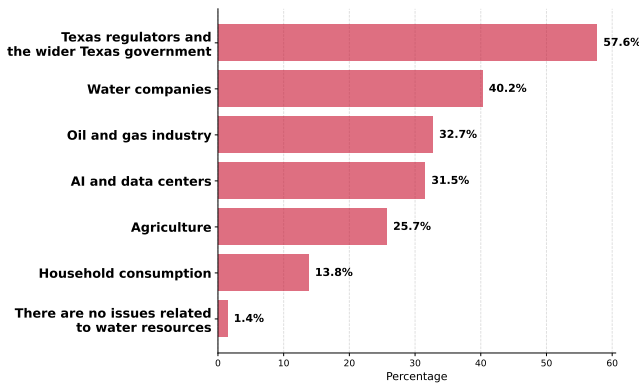


Figure 11 Which of the following do you think are most responsible for challenges related to water in Texas?

Figure 12 shows that households are already engaging in several relatively low-cost and low-effort water conservation behaviors, including watering their yards less frequently (43%), taking shorter showers (42%), and using more efficient appliances (39%). Across nearly all measures, however, the share of respondents willing to adopt a behavior exceeds the share already doing so. The largest gaps appear in changing yard landscaping (17.4% currently doing so versus 30.2% willing to do so) and reducing the use of chemicals such as fertilizers and pesticides (21.4% versus 33.1%), suggesting these may represent important opportunities for additional conservation efforts.

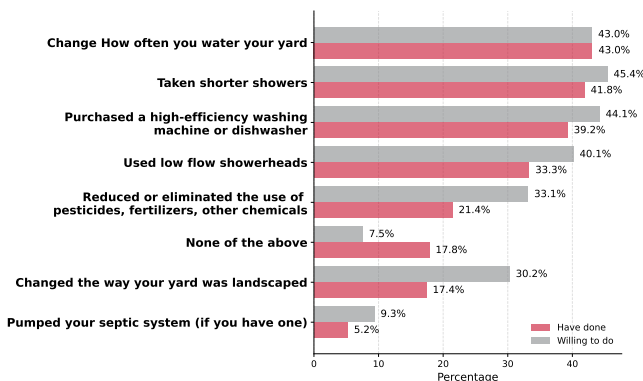


Figure 12 Have you or someone in your household done (or is willing to do) any of the following to conserve water?

Conclusion

The findings presented here are intended to inform the current debate on Houston’s energy and climate future and to serve as a resource for local officials, state legislators, utility planners, water authorities, and community organizations navigating one of the most consequential technology transitions in Texas history.

Taken together, the findings suggest that Houston residents do not reject the expansion of AI outright, but they do expect its costs and risks to be managed more transparently and equitably. Respondents recognize potential economic and educational benefits associated with AI while simultaneously expressing concerns about environmental impacts, electricity demand, water use, and the siting of data centers near their communities. The results also indicate that residents strongly prefer that businesses, rather than households, bear the costs of the infrastructure required to support AI expansion. As Texas continues to position itself at the center of the global AI economy, questions of infrastructure planning, environmental sustainability, affordability, and community participation are likely to become increasingly central to public debate.

Within the context of Texas’ rapid AI infrastructure expansion, the passage of the Texas Responsible Artificial Intelligence Governance Act (TRAIGA), the state’s growing water scarcity challenges, and broader national debates over AI governance and infrastructure, this report provides timely and place-specific evidence to inform policymakers, planners, and community stakeholders.

Methodology

Sample & data collection. SPACE City Panel, Wave 4, April 2026; $N = 1,525$; mode: online. MOE: $\pm 3.53\%$ for whole sample.

Weights. Post-stratified to age, sex, race/ethnicity, education, county. Missing demographics imputed.

Percentages: Unless explicit in text of figure, percentages calculated over the total of respondents.

Exclusions: Unless explicit in figure *Don't knows* and *Skipped* responses excluded from figures or analyses.

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