

# Comprehensive Overview of Abilene, Texas and Current Data Center Construction Experience

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Abilene, Texas has become one of the most important case studies in the United States regarding large-scale artificial intelligence and hyperscale data center development. The city is currently experiencing rapid economic growth, major infrastructure expansion, and increasing public debate over the long-term impacts of AI-focused data center construction.

## Overview of the Stargate Project

The primary project driving national attention is the Stargate AI campus associated with OpenAI, Oracle, and related technology partners. The development outside Abilene reportedly spans more than 1,000 acres and may ultimately contain approximately 4 million square feet of AI and cloud-computing infrastructure. The facility is intended to support advanced artificial intelligence processing and large-scale computing workloads.

## Massive Economic Activity and Construction Boom

Abilene has experienced a substantial increase in economic activity associated with the construction phase of the data center projects. Thousands of construction workers have reportedly arrived in the region. Hotels, restaurants, retail stores, and service businesses have experienced increased demand. Land values and development interest have also risen significantly.

Supporters of the projects argue that Abilene is becoming a nationally recognized technology hub and that the city could see long-term tax-base expansion and additional commercial investment.

## Housing Shortages and Rising Housing Costs

One of the most visible effects of the construction boom has been increased pressure on the housing market. The influx of workers has tightened apartment availability and contributed to rising rents and home prices. Local reports have described growing concerns about affordability and housing shortages.

Temporary worker housing, hotel occupancy, and short-term rentals have all increased as construction activity continues.

## **Electrical Grid and Power Demand Concerns**

AI-focused data centers consume extremely large amounts of electricity. Some estimates suggest that the Abilene campus could eventually require power consumption approaching or exceeding one gigawatt, which is comparable to the electricity demand of hundreds of thousands of homes.

This has raised concerns regarding ERCOT grid reliability, transmission infrastructure expansion, and whether Texas power infrastructure can keep pace with rapid AI-related development.

## **Water Use and Sustainability Concerns**

Many modern data centers use evaporative cooling systems that require substantial water consumption. In West Texas, where drought conditions and groundwater management are already significant issues, concerns have emerged regarding long-term sustainability.

Residents and policymakers are questioning how much water the facilities may consume and whether municipal, agricultural, and residential users could eventually compete for limited resources.

## **Labor Market and Construction Industry Impacts**

The data center construction boom has significantly affected the local labor market. Developers are reportedly offering higher wages for electricians and skilled trades than many residential or commercial contractors can afford.

As a result, some homebuilders and contractors report delays in housing construction and other projects because workers have shifted toward higher-paying AI infrastructure jobs.

## **Community Division and Public Debate**

Public opinion within Abilene appears increasingly divided. Some residents view the projects as transformational economic opportunities that could permanently improve the city's economy and visibility.

Others are concerned about rapid growth, strain on infrastructure, water use, housing affordability, and whether local residents are receiving sufficient long-term benefits from the developments.

## **Debate Over Long-Term Economic Value**

Critics argue that modern hyperscale data centers employ relatively few permanent workers compared to the enormous amounts of land, electricity, and water they consume.

Although construction employment can be substantial, many facilities operate with comparatively small long-term staffing levels.

Supporters respond that the long-term property tax base, infrastructure improvements, and secondary economic activity justify the investment.

### **Why Abilene Matters to Other Texas Cities**

Abilene is now widely viewed as a test case for how Texas communities may respond to rapid AI infrastructure growth. Cities across Texas are closely watching the experience to evaluate issues including:

- Water consumption and drought planning
- Electrical grid capacity
- Housing and infrastructure strain
- Tax incentives and economic return
- Zoning and land-use compatibility
- Long-term community impacts

Many policymakers believe Abilene demonstrates the importance of establishing zoning rules, infrastructure agreements, utility studies, and public engagement processes before approving major data center developments.

Prepared for informational and policy discussion purposes.