

Case Study

CyrusOne DFW17 Data Center



Pioneering Hyperscale Infrastructure

Executive Summary

In an era of explosive Data Growth driven by AI, cloud computing, and digital transformation, Hyperscale Data Centers (Hyperscale facilities are built for "Web-Scale" Operations, often handling petabytes of data and millions of users) are critical to supporting global enterprises. CyrusOne's DFW17 Data Center, located in Laguna Park, Texas, represents a groundbreaking collaboration between Data Center expertise and energy innovation. Developed in partnership with Calpine Corporation, this facility is part of the larger DFW10 campus adjacent to the Thad Hill Energy Center in Bosque County. With an initial 190 MW power capacity scalable to 400 MW, the \$1.2 billion project addresses key challenges in energy reliability, sustainability, and rural economic development. Set to go operational in Q4 2026, DFW17 exemplifies how strategic co-location with power generation can mitigate grid strains while fostering innovation in underserved regions.

Background

CyrusOne, a leading Global Data Center provider backed by investment giants like KKR (Kohlberg Kravis Roberts & Co.) and Global Infrastructure Partners, have a significant portfolio of facilities across North America, EMEA (Europe, Middle East, and Africa), and APAC (Asia Pacific). Specializing in secure, scalable colocation and Hyperscale Solutions, the company operates over 50 Data Centers worldwide, serving Fortune 500 clients in finance, tech, and healthcare. In Texas, CyrusOne's DFW metro presence includes established sites like DFW1 in Carrollton and DFW3-DFW5 in Allen, but the DFW17 project marks a bold expansion into Central Texas's rural landscapes.

Bosque County, home to Laguna Park, a small community of about 1,300 residents between Waco and Fort Worth, presents unique opportunities and challenges. The area's proximity to the Dallas-Fort Worth (DFW) metroplex (roughly 80 miles southwest of Dallas) offers **low-latency** connectivity, while its abundant land and access to natural

gas resources make it ideal for large-scale builds. However, rural infrastructure limitations, including grid constraints from the Electric Reliability Council of Texas (ERCOT), have historically deterred Hyperscale investments. Enter Calpine, the U.S.'s largest natural gas and geothermal power generator, with 27 GW (Giga-watts) of capacity nationwide. Their Thad Hill Energy Center, a 774 MW natural gas facility, became the anchor for this venture, enabling the first U.S. Data Center co-located directly with an existing power plant.

Announced in July 2025, the Project quickly advanced to Phase 2 and as of this Case Study construction is underway on a 250,000 sq ft single-story Data Center shell (including a two-story office component). Valued at ~\$60 million for the core build, DFW17 is the flagship of the DFW10 campus, targeting Hyperscale tenants needing massive, reliable compute power.

Challenges

The development of DFW17 faced several hurdles typical of greenfield Hyperscale Projects in non-traditional markets:

1. **Energy Reliability and Grid Strain:** Texas's ERCOT grid has experienced volatility, with Data Centers consuming up to 10% of peak demand. Traditional off-site power risked curtailments during scarcity events, threatening “Uptime” for Mission-Critical Operations.
2. **Sustainability Pressures:** Clients are demanding carbon-neutral operations, but rural sites often lack advanced cooling or renewable integration. Water scarcity in Central Texas added complexity for evaporative cooling systems.
3. **Economic and Community Integration:** Bosque County's rural economy relies on agriculture and small manufacturing. A billion-dollar Project risked local opposition over land use, traffic, and resource competition, while needing to deliver tangible benefits like jobs.
4. **Scalability and Speed to Market:** Hyperscale clients require rapid deployment—often within 18-24 months.....amid rising construction costs (up 20% since 2023) and **supply chain delays for transformers and chillers**.

Solutions

CyrusOne and Calpine's partnership leveraged innovative "Powered Land Capabilities" (PLC) to overcome these obstacles:

- ✓ **Co-Located Power Delivery:** Unlike conventional setups, DFW17 draws directly from the Thad Hill Energy Center via dedicated transmission lines, ensuring 99.999% uptime. Calpine's flexible generation can curtail output during grid emergencies, enhancing ERCOT stability while delivering 190 MW initially (expandable to 400 MW). This on-site approach reduces transmission losses by 15-20% and eliminates interconnection delays.
- ✓ **Sustainable Design Features:** The facility incorporates carbon-neutral strategies, including air-side economizers (leveraging outdoor air when ambient conditions are cooler or drier than the indoor environment) for free cooling (reducing energy use by 30%), closed-loop water systems for conservation, and biodiversity protections like native landscaping to preserve local habitats. Calpine's low-carbon fleet (natural gas with carbon capture potential) aligns with CyrusOne's net-zero roadmap, targeting **LEED Gold certification** (Certification Levels range from Certified to Silver to Gold to Platinum).
- ✓ **Modular and Scalable Build:** Using prefabricated modules, construction progressed from permitting in late 2024 to shell completion by mid-2025. The 190,000+ sq ft Phase 1 includes redundant N+1 power systems, **Tier III Certification (99.982 Availability....downtime of ~1.6 hours per year)**, and fiber connectivity to DFW's Carrier Hotels (Carrier Hotels emphasize interconnectivity, allowing multiple networks to physically and virtually connect (via cross-connects, peering, or direct fiber links) to exchange Data Traffic efficiently. Future phases allow plug-and-play expansion for AI workloads.
- ✓ **Community Engagement:** CyrusOne committed to local hiring (targeting 200 construction jobs, 50 permanent roles) and infrastructure upgrades, such as road improvements. Partnerships with Bosque County officials positioned the project as "Bosque County's Silicon Valley," boosting property values and attracting ancillary businesses.

Results and Impact

As of this Case Study, DFW17 is under construction, but early milestones signal success:

- **Operational Readiness:** Phase 1 shell completion on track for Q2 2026, with full energization by Q4 2026. Pre-leasing exceeds 60% for Hyperscale anchors, including cloud providers.
- **Economic Boost:** The \$1.2 billion investment has already spurred \$200 million in supplier contracts, creating 150 construction jobs. Long-term projections include 1,000 indirect jobs in logistics and services, transforming Laguna Park into a tech corridor.
- **Sustainability Metrics:** Modeling shows a 40% reduction in water use versus legacy DFW centers, with carbon emissions offset through Calpine's geothermal assets. Grid contributions during 2025 summer peaks demonstrated the model's reliability.
- **Strategic Wins:** As the first co-located Hyperscale site in the U.S., DFW17 positions CyrusOne as a leader in "energy-adjacent" development, attracting interest from peers like Digital Realty and Equinix.

Lessons Learned

1. **Energy Co-Location is Key:** Proximity to generation de-risks projects in volatile markets like ERCOT, setting a blueprint for Nationwide Replication.
2. **Rural Sites Offer Untapped Value:** Low land costs (\$0.50/sq ft vs. \$5+ in urban DFW) and incentives enable faster ROI, but require proactive community buy-in.
3. **Sustainability Drives Tenancy:** Integrated green features not only comply with regulations but differentiate in a competitive market.
4. **Partnerships Accelerate Scale:** Calpine's PLC model shaved 6-9 months off timelines, highlighting the power of vertical integration.

Conclusion

CyrusOne's DFW17 Data Center in Laguna Park, Texas, is more than a facility.....it's a catalyst for resilient, sustainable digital infrastructure. By bridging Energy and Data sectors, this Project addresses Hyperscale demands while revitalizing rural economies.

As it powers up in 2026, DFW17 will underscore Texas's role as a Global AI hub, proving that innovation thrives where power meets possibility. For enterprises seeking scalable, eco-conscious colocation, it sets a New Standard.