Case Study
QTS DC8 (DFW2 Campus Expansion), Wilmer, Texas

Executive Summary / Elevator Story

QTS Data Centers (a Blackstone portfolio company) is expanding its South Dallas (DFW2) hyperscale campus in Wilmer, Texas, with a new building designated as part of the ongoing DC series (following DC7 filings). DC8 represents the latest addition to this rapidly growing campus, designed as a two-story Hyperscale Data Center facility in the range of approximately 360,000–560,000 sq ft, delivering tens of MW of critical IT load capacity.

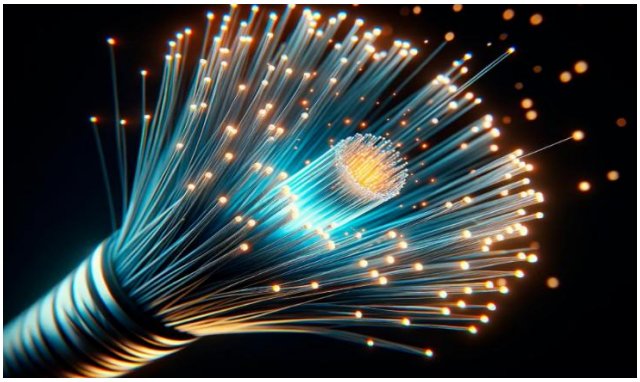
It features QTS's proprietary **Freedom Architecture, advanced water-free closed-loop cooling**, high redundancy (targeting Tier III/IV standards), and sustainability-focused design. The Project supports surging demand for AI, cloud, and digital infrastructure in the Dallas-Fort Worth (DFW) region while delivering significant economic benefits to Wilmer and southern Dallas County through jobs, investment, and responsible development. Construction timelines align with the campus's phased rollout, with facilities like this one expected to come online in the 2027–2028 period.

Background

QTS Data Centers has established a major presence in Texas, operating or developing facilities in Irving, Fort Worth, and now aggressively expanding its newest South Dallas campus in Wilmer. The DFW2 campus at addresses around 303 Mason Road and nearby sites (including expansions into adjacent Lancaster) is part of QTS's broader

strategy to meet explosive demand driven by generative AI, Hyperscale cloud providers, and enterprise digital transformation.

The campus sits on a large site (initially referenced around 52+ acres) with excellent connectivity via major fiber providers (AT&T, Lumen, Zayo), proximity to I-20/I-35E/I-45, and access to robust utility infrastructure from Oncor Electric Delivery and local cooperatives. Wilmer's business-friendly environment, available land, and Texas incentives (including sales tax exemptions on energy/equipment and potential Chapter 313 benefits) make it ideal.



DC8 follows earlier buildings such as DC1 (≈414,000 sq ft, under construction/completion around late 2025), DC2 (470,000 sq ft, $300M), DC3 (560,000 sq ft, $350M, 43 MW critical load), and DC7 (363,500 sq ft / 33,770 sqm, $290M, filed 2026). These developments position the campus as a multi-building Hyperscale hub complementing QTS's existing Texas footprint.

Design and Specifications

DC8 follows QTS's standardized Freedom Design for Hyperscale facilities, emphasizing modularity, rapid deployment, scalability, and efficiency. Key specifications (modeled on recent campus buildings like DC3 and DC7):

- ✓ Building Type: Two-story Hyperscale Data Center with dedicated Data Halls on both levels and supporting administrative/MEP space.
- ✓ Size: Approximately 360,000–560,000 sq ft total (exact for DC8 aligns with recent filings in this range).
- ✓ Design Standards: High-density capable (up to 50 kW+ per rack in optimized halls), modular white space, dedicated Mechanical/Electrical/Plumbing (MEP) galleries.
- ✓ Redundancy: N+1 or 2N configurations for critical systems, targeting Tier III/IV uptime standards.
- ✓ Architecture: QTS Freedom platform for standardized security, scalability, and operational efficiency. Designed by firms such as Highland Associates (for similar buildings).

- ✓ Other Features: Carrier-Neutral connectivity, advanced Building Management Systems (BMS), fire detection/suppression, and security infrastructure.

The design prioritizes future-proofing for AI/high-density workloads while maintaining operational excellence and sustainability.

Detailed Cooling Infrastructure Information

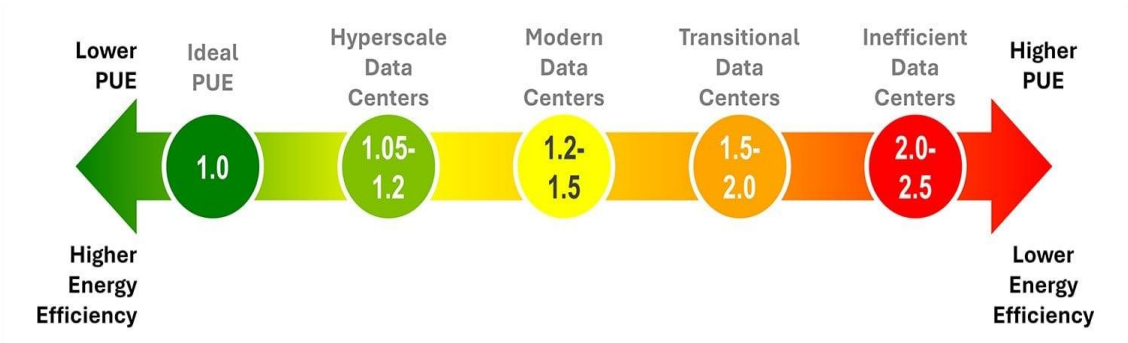
QTS DC8 (and the broader DFW2 campus) utilizes QTS's industry-leading water-free closed-loop cooling system as part of the Freedom Design. This is a key differentiator in water-stressed Texas.

Core Technology:

- ✓ **Low-pressure pumped refrigerant system**: Removes heat using a closed-loop refrigerant cycle combined with outside air economization when ambient conditions allow. No evaporative cooling towers or significant water consumption for the primary cooling process once operational.
- ✓ **Air-side economization**: Leverages free cooling from outside air during cooler periods, reducing mechanical load (winter months).
- ✓ **Support for high-density/AI workloads**: Advanced air handlers with potential for liquid immersion or direct-to-chip liquid cooling options in high-density zones to achieve superior efficiency.

Performance Metrics:

- ✓ Targets industry-leading Power Usage Effectiveness (PUE) below 1.3.



- ✓ **Water Usage Effectiveness (WUE)** of 0 — the system does not consume water for cooling. Municipal water is used only for standard building needs (similar to any commercial facility).

- ✓ Annual water savings: QTS reports saving more than 48 million gallons of water per Data Center annually compared to traditional evaporative systems (equivalent to the water use of over 2,200 U.S. homes). Across the portfolio, this has saved nearly 1.5 billion gallons in recent years.

Additional Sustainability Elements:

- ✓ Smart controls and AI-optimized load balancing via BMS (Building Management System).
- ✓ LED lighting and energy-efficient components.
- ✓ Potential heat recapture or renewable integration.
- ✓ Overall design supports LEED/ENERGY STAR principles (projected 20–30% lower emissions vs. legacy facilities through efficient transformers and operations).

This closed-loop approach protects local water resources (rivers, lakes, groundwater) while delivering high reliability and low operational costs, making DC8 highly attractive to ESG-focused Hyperscalers and Enterprises.

Power and Availability; Backup Generator Count

Power Infrastructure:

- ✓ **Utility Supply**: Robust feeds from Oncor Electric Delivery's grid (or local cooperatives like Trinity Valley), with scalable capacity. Campus-wide references indicate support for up to ~75 MW critical power across phases.
- ✓ **Critical IT Load** (per building examples): DC3 targeted ~43 MW; similar buildings in the 30–50+ MW range depending on final design and density.
- ✓ **Redundancy & Availability**: Dual-fed or redundant utility paths, integrated with Uninterruptible Power Supply (UPS) systems for seamless failover. Designed for high availability (99.982%+ or better, aligning with Tier III/IV).

Backup Generators: Specific generator counts for DC8 are not publicly detailed in filings (as is common for security/sensitivity reasons). However, QTS facilities of this scale typically feature:

- ✓ Multiple large diesel generators in a parallel redundant N+1 or 2N configuration.
- ✓ On-site diesel fuel storage (commonly 48 hours or more at full load, with multiple refueling contracts for extended runtime).
- ✓ Integration with UPS for instantaneous bridging during utility outages.

This setup ensures continuous operation during grid disturbances, a critical requirement for hyperscale and mission-critical tenants.

Project Timeline

Timelines for recent/analogous buildings in the DFW2 campus:

- ✓ **DC3** (560k sq ft, $350M): Filed ~April 2025; groundbreaking targeted November 2025; substantial completion January 2027.
- ✓ **DC2** (470k sq ft, $300M): Construction start May 2025; completion June 2026.
- ✓ **DC7** (363.5k sq ft, $290M): Filed April 2026; construction start ~September 2026; completion/target launch December 2027.

DC8, as a subsequent phase, is expected to follow a similar 12–18 month construction window once permitted, with groundbreaking potentially in late 2026 or early 2027 and operational readiness in 2028. Site preparation, permitting via Texas Department of Licensing and Regulation (TDLR), and utility coordination are key early milestones. Leasing opportunities for earlier buildings were anticipated in late 2026.

Economic and Strategic Impact

Economic Impact:

- ✓ Direct Investment: Hundreds of millions per building (e.g., $290M–$350M range).
- ✓ Job Creation: Hundreds of construction/trade jobs during build-out + 100–200+ permanent high-tech roles per major facility (critical operations technicians, engineers, security, etc.). Broader campus supports ongoing maintenance and support positions.
- ✓ Workforce Development: Partnerships with local colleges, **veteran programs**, and internships.

- ✓ Multiplier Effects: Significant boost to local GDP, suppliers, and tax revenues (property, sales/use tax benefits for qualifying activities). Estimated broader economic impact in the hundreds of millions over the lifecycle.

Strategic Impact:

- ✓ Strengthens DFW's position as a top U.S. Data Center market.
- ✓ Supports national digital infrastructure needs for AI and cloud growth.
- ✓ Community benefits through QTS's responsible neighbor approach: noise/traffic mitigation, local supplier preferences, education/nonprofit support, and environmental stewardship (tree replacement, wildlife studies, minimal water impact).
- ✓ Positions Wilmer/southern Dallas County as a logistics and tech growth corridor.

Conclusion

QTS DC8 exemplifies the next phase of hyperscale development at the Wilmer South Dallas campus. Combining cutting-edge technical performance (Freedom architecture, water-free cooling with PUE <1.3, high redundancy) with strong sustainability credentials and meaningful local economic contributions. As part of QTS's multi-GW portfolio, it helps power the AI-Driven digital economy while demonstrating responsible growth in a key Texas market. With construction momentum building across the campus, DC8 and its sister buildings are poised to deliver reliable, efficient, and scalable capacity for years to come, reinforcing QTS's leadership in next-generation data infrastructure.