

**COMMISSIONING | CASE STUDY**

Hyperscale Data Center

(Confidential Client)



Project: Hyperscale Data Center Commissioning

Location: Central Ohio Area

Business Sector: Mission-Critical, Data Center

Services: Commissioning

Project Start Date: Summer, 2024

Project End Date: Early 2026

Project Overview:

In 2024-2026, the customer constructed a new multi-megawatt data center building in the Columbus, OH area. TechSite was awarded the commissioning contract for its critical electrical and mechanical systems.

TechSite Solution:

The building was completed in multiple phases, each phase beginning with Level 2 and Level 3 activities, followed by Level 4 and Level 5/Integrated Systems Testing.

Prior to on-site work, the TechSite Cx team conducted internal training on the systems to be commissioned, reviewed and customized functional testing scripts, as well as familiarizing the Cx team members with required Safety Training for the site.

Each phase of the project began with inspection and review of Cx readiness and start up activities (Level 2 and Level 3) commissioning. During L2 and L3, the TechSite Team reviewed the General Contractor's work, highlighting any missing or incorrect documentation and comparing the installed work to the Construction Documents and the customer's Program Requirements. We also looked for QA/QC items such as torque marks, foreign objects and debris, and proper labeling on equipment. Any deficiencies or deviations we found were raised as Commissioning Issues.

MISSION CRITICAL

ENGINEERING

CONSTRUCTION

► **COMMISSIONING**

MAINTENANCE

FACILITY MANAGEMENT



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When construction was complete, the responsibility was handed over to our team for Functional Performance Testing (Level 4) and Integrated Systems Testing (Level 5).

The TechSite commissioning team coordinated load banking, performed IR Scanning and Power Quality Monitoring. We reviewed and corrected (when needed) breaker settings per the Short Circuit Coordination Study. The mechanical team verified emergency cooling protocols and completed Deferred Water Testing and Fuel Oil Testing.

Throughout the project, the TechSite teams participated in the daily commissioning meeting and provided daily commissioning reports to the customer.

The critical systems in each phase of the project that TechSite commissioned included:

- Utility MV Transformers
- Generators
- UPS Systems
- EPMS, BMS
- Electrical Switchgear, Panelboards, Transformers
- PDUs, ATSS, Relays
- Dynamic Load Balancing (DLB)
- Air-Handlers
- Exhaust Fans
- Split-Systems
- Motorized Damper Systems
- Energy Recovery Ventilators



As an integral part of the customer's Commissioning Team, TechSite's engineers uncovered grounding issues with the generator and identified HVAC setpoints that did not match the customer's requirements. We communicated issues with pressure regulation design aspects of the data center room. We found discrepancies with the Outside Air Sensor locations which caused inefficient performance of the interior air handlers. TechSite reported the issues and monitored the responses to ensure the issues were either corrected or accepted as-is by the customer.

After each phase was completed, a full report was submitted to the customer. The report includes observations, tests results, screenshots from all EPMS and BMS testing, IR scanning, PQM results, scripts used, TAB reports, daily commissioning reports, and calibration data from the test equipment utilized.

At TechSite, we are committed to keeping our customers' mission-critical facilities running smoothly, ensuring you can stay connected and operate with confidence. We expertly plan, design, build, test, operate, and maintain these essential spaces, aiming to maximize reliability and efficiency with speed, expertise, and a commitment to customer satisfaction.

