

CRYOCOOL DATA CENTER MECHANICAL CORP.
5200 Northwest Parkway, Dallas, TX 75201 | Lic: TACLA-88104E
MISSION-CRITICAL HVAC SYSTEM PROPOSAL

Date: September 21, 2026

Project: 2 MW High-Density Data Center Cooling Infrastructure (Tier III+)

Prepared For: Apex Data Systems LLC

1. SYSTEM SPECIFICATIONS & ARCHITECTURE:

- Cooling Capacity: 2,000 kW IT Load with 100% concurrent fault tolerance (2N Redundancy).
- Chiller Plant: (4) 200-Ton oil-free magnetic bearing centrifugal chillers. Utilizing R-1234ze low-GWP refrigerant. Exceptional part-load efficiency (COP 6.2 at 50% load).
- Heat Rejection: (4) closed-circuit fluid coolers with redundant basin heaters and vibration isolation springs.

2. AIR HANDLING & THERMAL MANAGEMENT:

- (16) High-efficiency CRAH units featuring backward-curved EC fans and modulating 2-way chilled water control valves.
- Integrated dual-path power feeds with automatic transfer switches (ATS) per CRAH unit for uninterrupted uptime during power anomalies.

3. ECONOMIZATION & PIPING:

- Plate-and-frame heat exchangers for 100% water-side economizer (free cooling) operation during ambient wet-bulb temperatures below 45°F.
- Piping: Schedule 80 carbon steel welded mains with dielectric unions and seismic bracing conforming to ASCE 7-22.

4. PRICING & INVESTMENT SUMMARY:

- Total Turnkey Investment (2N Redundant Chiller Plant, CRAH Units, Economizer, Controls & Commissioning): \$1,890,000
- Timeline: 28 weeks.
- Warranty: 3-year comprehensive parts and labor warranty, including annual preventative maintenance visits.