



Two Liberty Place Central Utilities Plant Energy Retrofit

PROJECT INFORMATION

CONCORD DIVISION
Commercial

PROJECT LOCATION
Philadelphia, PA

MARKET
High-Rise

SERVICES
Design Builder
Engineering

CONSTRUCTION COST
\$6 Million

ABOUT TWO LIBERTY PLACE

Two Liberty is a 57-story iconic multi-use high rise in downtown Philadelphia. The building consists of retail shopping, an expansive food court, 30 floors of Class A office space – corporate office for Cigna Insurance company, an upscale restaurant and 20+ floors of high-end condominiums.



PROJECT SUMMARY

Rich Energy Solutions (RES) partnered with Concord Engineering a large engineering and development firm, to deliver a turn-key energy retrofit of the thermal plant located on the 36th-38th floors of the building. The project consisted of replacing 2,000 tons of chillers with new high efficiency mag-bearing chillers, new fiberglass modular cooling towers, upgraded BACnet controls, a 1000-ton plate and frame heat exchanger for free cooling in the winter and a dynamic chiller plant optimization software package to completely modulate the chillers, pumps, cooling towers and valves automatically based on demand!

CHALLENGES

- Due to the close proximity of other buildings, a helicopter lift was prohibited.
- Without an adequately sized freight elevator and rigging path, the antiquated mechanical equipment could not be replaced.

SOLUTIONS

- Concord devised a plan to build in place cooling towers and a rigging path to allow addition of new high efficiency centrifugal chillers.

RESULTS

- ✓ 47% thermal plant energy reduction
- ✓ Qualified for PECO custom incentive and received a significant rebate from their commercial incentive program.

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