



Case Study

Customer
Aerospace Facility

Location
Southeastern US

Industry
Aerospace

Product
Aegis W



Powering Aerospace Facility with Efficient, Electric Hot Water

What the Client Needed

A leading aerospace company expanding its operations at a coastal facility in the southeastern U.S. faced a critical challenge: designing a high-efficiency domestic hot water system for new office, kitchen, and warehouse spaces. The project required a fully electric solution that could meet stringent standards for reliability, performance, and sustainability.

Initially, the design specified competitor equipment, but due to prior negative experiences, the client pivoted to a new solution. Their key objectives included:

1. Achieving high-efficiency domestic hot water production with minimal environmental impact
2. Meeting a tight delivery and startup timeline
3. Ensuring seamless integration with existing infrastructure

Site-specific challenges included dual temperature loops—120°F for lavatories and showers, and 140°F for kitchen use—and the need to operate within a fully electrified building infrastructure. The humid environment and cold source water temperatures added complexity, including condensation risks on equipment.

The Solution

Lync delivered a cutting-edge heat pump water heater system that met the project's aggressive timeline and performance requirements.

The solution featured:

- Aegis W 250 water-source heat pump
- Mark I heat exchanger module
- Twin 119-gallon storage tanks

This configuration supported dual temperature loops and utilized the building's chilled water loop (50–55°F) as a source, providing both heating and supplemental cooling.



The system achieved an estimated Coefficient of Performance (COP) of 2.9, optimizing energy use across heating and cooling. In addition, the Total Energy Ratio (TER) reached 5.35, reflecting combined efficiency gains from heating and the supplemental cooling contribution.

Scalability was built into the design, with options for future upgrades such as retrofit tanks or instantaneous heaters. The heat pump also offset an average of 8.5 tons of refrigeration (102,000 MBH), reducing chiller load and operational costs.

The installation required close coordination among all parties to ensure seamless integration and timely delivery. Through proactive communication and collaboration, the team overcame site-specific challenges and delivered a solution that met the project's demanding performance and reliability requirements.

Return on Investment

The project delivered a robust and scalable hot water solution that:

1. Improved energy efficiency
2. Lowered environmental impact
3. Enhanced system resilience and reliability—critical for high-performance operations

Early collaboration with design and engineering teams helped identify site-specific challenges, while proactive adjustments to installation procedures mitigated potential inefficiencies. Comprehensive training and clear documentation supported long-term system reliability and ease of maintenance.

This successful implementation demonstrates Lync's ability to tailor high-efficiency solutions to complex, mission-critical environments, setting a benchmark for future projects across industries.

Lync Complete Solutions

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