



Chappaqua Performing Arts Center

Case Study: Replacement of End-of-Life Oil-Fired Boiler System at CPAC

Overview

The Chappaqua Performing Arts Center (CPAC) previously relied on an aging oil-fired water boiler that had exceeded its service life. Over time the system's deteriorating heat exchanger and failing components led to persistent water leakage, excessive fuel consumption, and unreliable heating performance. To address these issues, CPAC undertook a project to remove the failing boiler and replace it with a modern, efficient, and scalable heating solution.

Problem Statement

The existing oil-fired boiler presented multiple mechanical and operational concerns:

- Persistent water leaks from the boiler vessel and surrounding piping
- Declining efficiency, resulting in higher fuel usage and operating costs
- Frequent breakdowns, requiring routine service calls
- Aging and corroded components with limited replacement part availability
- Inconsistent heating output, impacting building comfort and system reliability

Given the boiler's age and condition, continued repair was no longer feasible or cost-effective.

Project Objective

The objective was to install a modern heating system that would:

- Reduce energy and operational costs
- Improve reliability and safety
- Provide scalable heating capacity
- Better match heating output to building load
- Decrease maintenance frequency and downtime
- Transition from oil to a cleaner, more efficient natural gas system

