

IDEA

TECHNOLOGY DEMONSTRATION OVERVIEW

COMPANY
Radiator Labs

TECHNOLOGY
Cozy

DEMONSTRATION SITE(S)
FDNY Engine Company 318 &
Ladder Company 166
2510 Neptune Avenue, Brooklyn NY

DEMONSTRATION PERIOD
June 2014 – June 2015



SYSTEM(S) INVOLVED

HEATING



TYPE OF SAVINGS
GENERATED

NATURAL GAS

VENDOR'S POTENTIAL
FOR SAVINGS

**UP TO
30%**

SAVINGS ACHIEVED
IN THIS DEMONSTRATION

7%*



SAVINGS

Technology Description

The Cozy is a smart, insulated radiator cover with independently controlled fans to distribute heat to desired spaces. The Cozy enclosure fits over existing radiators and blocks convection, using a thermostatically controlled fan that transfers heat from the radiators to the room when it is called for based on the temperature set point. By allowing heat to be sent to the room only when it is needed based on individual room set points, the Cozy allows for room-by-room zone control. Additional controls that provide direct control over boilers and wireless communications may be needed in conjunction with Radiator Labs devices for successful implementation and energy savings.

Optimum Facility Characteristics

- Central heating system with a steam boiler
- Uneven heating distribution and overheated spaces
- Steam radiators (no baseboard heaters), the Cozy covers will work well with 1 or 2 pipe steam systems
- Oil, natural gas, district steam are all eligible
- Radiator Labs supplies and installs communications - no connection needed to existing infrastructure

Demonstration Results*

A savings of 7% was recorded, however various interruptions to baseline data collection and boiler malfunction during the demonstration led to significant uncertainty in the accuracy of the savings. Intermittent adjustment to the cozy covers by the Engine Company staff also contributed to the decrease in the potential for savings.

Recommendations for Implementation

- Internet connections between the boiler controller and Radiator Labs gateway need to be verified as operational prior to installing the Cozy system.
- Boiler's cycling should be checked to ensure that the heating system is functioning properly after the Cozys are installed.
- Unconditioned spaces should be thermally isolated from the rest of the building.
- Staff training and engagement with the newly-installed Cozy covers are an important step in having the system work optimally at all times.
- Gas usage data from utility bills can be analyzed to determine baseline energy usage. The Cozy units can also be easily removed to establish the baseline operational data.

www.radiatorlabs.com