

# COMPARATIVE CASE STUDY

Cambridge Space Heaters vs. Air Turnover

**2 Side by Side Tenants – Central PA**



## Air Turnover Heaters

## Cambridge Space Heaters

### Building Specifications

- R-19 Roof / R-3 Walls
- 24,000 ft<sup>2</sup> x 34' high

- R-19 Roof / R-3 Walls
- 62,000 ft<sup>2</sup> x 34' high

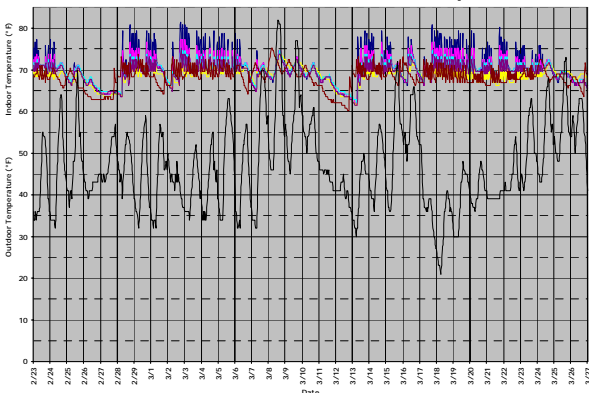
### Heating System

- (1) Air Turnover Heater
- Floor mounting
- 1,250 MBH total
- Unknown CFM
- 6 HP total – intermittent (turned off due to noise)

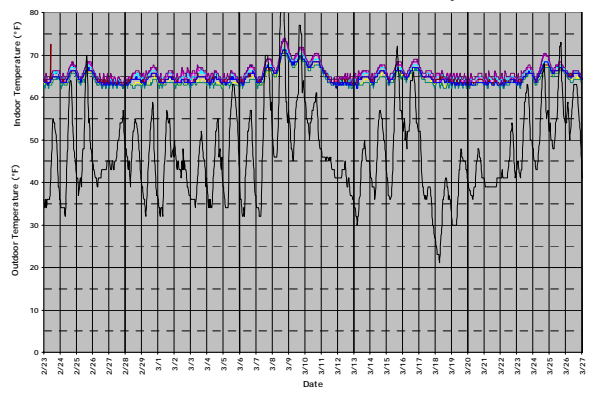
- (2) Cambridge Space Heaters
- Roof top mounting
- 1,800 MBH total
- 11,400 CFM total
- 6 HP total - intermittent

### Performance

± 12° indoor variation from setpoint



± 4° indoor variation from setpoint



### Operating Costs

Based on 5,441 Heating Degree Days

\$0.16/ft<sup>2</sup> Gas cost @ \$0.50/therm  
\$0.05/ft<sup>2</sup> Electric cost @ \$0.08/Kwh

\$0.10/ft<sup>2</sup> Gas cost @ \$0.50/therm  
\$0.02/ft<sup>2</sup> Electric cost @ \$0.08/Kwh

**\$0.21/ft<sup>2</sup> (\$5,000/year) Total Cost**

**\$0.12/ft<sup>2</sup> (\$7,000/year) Total Cost**

### Summary

The Cambridge system used **43% less** total energy.

If the 24,000 ft<sup>2</sup> facility had installed a Cambridge system they could have saved approximately **\$2,000/year** operating at \$0.12/ft<sup>2</sup> vs. \$0.21/ft<sup>2</sup>.