PART 15

Heating Load Factors

15.01 Safety Factors

A. Room/Space Peak Loads **1.1 × Calc. Load**

B. Floor/Zone Loads (Sum of Peak) **1.0 × Calc. Load**

C. Floor/Zone Loads (Block) **1.1 × Calc. Load**

D. Building Loads (Sum of Peak) **1.0 × Calc. Load**

E. Building Loads (Block) **1.1 × Calc. Load**

F. Generally: Sum of Peak Loads = 1.1 × Block Loads

15.02 Heating Load Credits

A. Solar. Credit for solar gains should not be taken unless building is specifically designed for solar heating. Solar gain is not a factor at night when design temperatures generally reach their lowest point.

B. People. Credit for people should not be taken. People gain is not a factor at night when design temperatures generally reach their lowest point because buildings are generally unoccupied at night.

C. Lighting. Credit for lighting should not be taken. Lighting is an inefficient means to heat a building and lights are generally off at night when design temperatures generally reach their lowest point.

D. Equipment. Credit for equipment should not be taken unless a reliable source of heat is generated 24 hours a day (i.e., Computer Facility, Industrial Process). Only a portion of this load should be considered (50%) and the building heating system should be able to keep the building from freezing if these equipment loads are shut down for extended periods of time. Consider what would happen if the system or process shut down for extended periods of time.

15.03 Heating System Selection Guidelines

A. If heat loss exceeds 450 Btu/Hr. per lineal feet of wall, heat should be provided from under the window or from the base of the wall to prevent downdrafts.

B. If heat loss is between 250 and 450 Btu/Hr. per lineal feet of wall, heat should be provided from under the window or from the base of the wall, or it may be provided from overhead diffusers, located adjacent to the perimeter wall, discharging air directly downward, blanketing the exposed wall and window areas.

C. If heat loss is less than 250 Btu/Hr. per lineal feet of wall, heat should be provided from under the window or from the base of the wall, or it may be provided from overhead diffusers, located adjacent to or slightly away from the perimeter wall, discharging air directed at or both directed at and directed away from the exposed wall and window areas.

15.04 *ASHRAE Standard 90.1-1989*

A. Pick-Up Loads **30% Maximum System Capacity Allowance for Morning Warm-Up Cycles**

B. Safety Factor **10% Maximum**