



October is *Energy Awareness Month*. The AEE Chicago Charter Chapter takes this opportunity to recognize professional engineers, managers, & organizations for their outstanding achievements over the past year. Looking for Nominations.

Nomination Categories:

- Energy Management Executive of the Year

Nomination Category:

Nominee's Name: Frederick J. Ringe
Organization: EMA Chicago, Inc.
Address: 21 Indian Knoll Road
Phone Number: 630-231-3986
Email Address: fringe@emachicago.net

Description of Outstanding Achievement –Fresh Air Cooling in Schools

Nineteen schools have been retrofitted with the FreshAire system in the last three years to achieve heat relief and provide a solution to high CO₂ levels. The FreshAire Ventilation System developed by EMA Chicago has proven to increase air flow through a building up to 300% while being able to reduce CO₂ to building code required levels. The key to the performance of the building is in how the FreshAire System optimizes air flow. The FreshAire System is responsive to continuously changing outdoor temperatures, outdoor humidity, indoor temperatures, building pressure, and shifting occupancy levels.

Originally conceived to be a solution for school classrooms, the application has grown to include cooling large, poorly ventilated spaced including gymnasiums, auditoriums, cafeterias, and theaters. In air-conditioned spaces, a 35% reduction in utility bills can be expected. Most recently, a FreshAire Cooling project entailed conversion of a gymnasium/weight lifting room to a high aerobic "spin" class at Glenbrook North High School in Northbrook Illinois.

To achieve energy efficiency, buildings have been "tightened up" since the early 70s to minimize uncontrolled heat loss. ASHRAE (the American Society for Heating, Refrigeration and Air-conditioning Engineers) reports that 50% of all indoor air quality problems today are related to poor ventilation. A new approach to building control is required. New buildings can have better designs. The issue is how to solve the problem in existing buildings. In K-12 schools alone, the EPA reported in 1995 that one in four of our 110,000 facilities reported IAQ problems due to poor ventilation. This is most likely an underestimate. Problems reported include increased teacher/student absenteeism caused by asthma and allergies, decreased productivity, costly mold remediation, and the rise in litigation.

The FreshAire System provides the lowest investment solution to "tight" building health and comfort problems with dramatic reductions in utilities. (The FreshAire System was given the Illinois Chapter of ASHRAE Award for Excellence in Engineering in 2004 for the solution to over-heating and high CO₂ levels in classrooms.)

Nominator's Name: Norm Hansen
Organization: Energy USA, Inc
Address: 27 W 093 Geneva Road, Winfield, IL 60190
Phone Number: 630- 587-5665
Email Address: norm@EnergyUSA.net