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Top Five Money-Saving Cooling Industry Changes

By David Geer

With modern server configurations intensifying heat and location-specific heat density, data center managers need an acute awareness of the best new developments from inside the cooling industry. The top five money-saving changes are:

1. Economizers rule. "ASHRAE's TC 9.9 Thermal Guidelines for Data Center Processing Environments are prompting data centers to use economizers," says Joe Capes, business development director, Schneider Electric's IT Cooling Business. Airside economizers take advantage of favorable outside air conditions so chillers do not run as much while waterside economizers dispense with refrigeration for local water that is already cool enough. Economizers can save as much as 70 percent of annual cooling system energy costs in some climates.

2. Efficiency standards rock! "Standards such as those in ANSI/ASHRAE 90.1-2010 provide both prescriptive and non-prescriptive paths for compliance," says Capes. Examples include replacing legacy cooling with higher Energy Efficiency Ratio (EER) solutions such as "In Row" and "Over Aisle" cooling.

3. Raised flooring on the way out? With the expanded use of flooded air supply systems, the only remaining use for the raised floor is cable management, which is not cost justified, according to Carl Cottuli, data center energy expert and vice president of product development, Eaton Wright Line.

4. Use buildings as cooling platforms. The industry is architecting buildings as cooling platforms in themselves, incorporating design features and technologies that are key to the overall cooling system, says Cottuli.

5. Integrate cooling systems. Sensing temperature, humidity and power consumption by racks and using that data to auto-manage CRAC unit efficiency can go a long way in cutting down.