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Technical Concerns with the CASE Report on Nonresidential Computer Room Efficiency

I have the following technical concerns with the CASE Report on Nonresidential Computer Room Efficiency.

First, all of the analysis assumes 100% of the economization hours are available for an airside economizer. Unfortunately in California unsatisfactory environmental factors exist such as ocean saltwater spray, higher humidity, smog, and most recently smoke from fires which would decrease the hours airside economization would be viable for a data center or computer room that requires clean air for sensitive servers.

Secondly, air economizers have a 10°F increase in economizer temperature while all other technologies have a 25°F increase. Standard redundancy, structural, and system design considerations may be challenging to uphold and also meet the new requirements.

Finally, if evaporatively-cooled technology needs to be applied to meet these requirements where a basic "dry" system would have been able to be applied, water consumption will go from zero to millions of gallons per year in some cases.