

**INTERPRETATION IC 90.1-2004-24 OF  
ANSI/ASHRAE/IESNA STANDARD 90.1-2004  
Energy Standard for Buildings Except Low-Rise Residential Buildings**

**Date Approved: 3 October 2008**

**Request from:** Kevin Dickens, PE (E-mail: [kevin.dickens@jacobs.com](mailto:kevin.dickens@jacobs.com)), Jacobs Engineering, 501 North Broadway, St. Louis, MO 63102.

**Reference:** This request for interpretation refers to the requirements presented in ANSI/ASHRAE/IESNA Standard 90.1-2004, Section 2.3(c), regarding the Scope and the applicability of the Standard to Commercial Datacom Facilities, and Interpretation IC90.1-2004-20 approved June 22 and 23, 2008.

**Background:** In the previous interpretation request, the Society was asked to address how chilled water and heating plants serving primarily process loads should be addressed in under Section 11 and Appendix G. Specifically, plants that serve a majority of systems that use energy primarily for industrial, manufacturing, or commercial processes, which are in turn exempt from the Standard.

The Society responded, in part stating, “The central plant is exempt from the requirements of Standard 90.1 and should be identical in both the Proposed Building Design and Budget Building Design. In addition, trade-offs to any portions of the building served by the exempt chilled water system would manifest themselves in differences in energy use of the exempt chilled water system, therefore, are not allowed within Section 11. This means trade-offs involving lighting systems, envelope components and secondary HVAC systems in areas served by the exempt chilled water system are not allowed and must comply prescriptively.”

**Interpretation:** Based on the previous interpretation it is understood that plants that serve primarily exempt loads are also exempt, and in turn trade offs that may affect the associated plant energy (now treated as process load) are no longer subject to trade-off under Section 11 and Appendix G. It is further understood that process loads shall be identical for both the baseline building performance rating and for the proposed building performance rating.

However, project teams may follow the Exceptional Calculation Method (ASHRAE 90.1-2004 G2.5) to document measures that reduce process loads. Documentation of process load energy savings must include a list of the assumptions made for both the base and proposed design, and theoretical or empirical information supporting these assumptions. These assumptions and supporting information could in fact be the trade-offs normally associated with Section 11 and Appendix G, if it was acceptable to the Rating Authority.

Regardless of any trade-off strategies that may be applied to reduce process loads, those lighting, systems, envelope components and secondary HVAC systems associated with exempt plants would still have to comply prescriptively.

**Question:** Is this interpretation correct?

**Answer:** No

**Comment:** Trade-offs to unregulated equipment are never allowed when using the Energy Cost Budget Methodology.

Trade-offs to unregulated process loads are allowed when using Appendix G, 2004 only when approved by the rating authority (see Table G31.12). If approved, those trade-offs may require the use of Exceptional Calculation Methods (Section G2.5) if no simulation program is available that accurately models the scenario. If trade-offs to process equipment are approved by the rating authority and are able to be modeled by the simulation program, the exceptional calculation method is not required. Documentation requirements for justifying the reduction in process loads or equipment are determined by the Rating Authority.

Regulated lighting, envelope and HVAC systems associated with the exempt central plant would need to meet prescriptive requirements.