

**INTERPRETATION IC 90.1-2004-20 OF  
ANSI/ASHRAE/IESNA STANDARD 90.1-2004  
Energy Standard for Buildings Except Low-Rise Residential Buildings**

**Date Approved: Questions 1-3: 22 June 2008; Question 4: 23 June 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 IC 90.1-2004-17.

**Background:** Section 2.3(c) of the Standard states that it does not apply to "equipment and portions of building systems that use energy primarily to provide for industrial, manufacturing, or commercial processes."

In a previous interpretation 90.1-2004-17 provided by the Society, the comments stated in part, "...the building envelope and systems must meet all requirements of Std. 90.1-2004, with the exception of the *space conditioning system* (emphasis added) installed specifically to support the Datacom equipment."

**Interpretation No. 1:** The definition of the "space conditioning system" is the air handling or direct liquid cooling equipment specifically associated with the Datacom equipment within the Datacom space.

For systems that utilize split systems, such as compressorized Computer Room A/C Units (CRACs) that employ dry coolers or remote DX, the CRACs, pumps, dry coolers, condensers, etc., would be exempt.

**Question No.1:** Is this interpretation correct?

**Answer No.1:** YES

**Comments No.1:** None.

**Interpretation No. 2:** For systems that utilize a dedicated chilled water plant, the CRACs, chillers, cooling towers, pumps, etc., would be exempt.

**Question No.2:** Is this interpretation correct?

**Answer No.2:** YES

**Comments No.2:** None.

**Interpretation No. 3:** In those cases where the chilled water plant also serves non-Datacom facilities, the plant would not be exempt and would be subject to the requirements of the Standard. The Standard would apply even if the majority of the plants' capacity and associated energy use was associated with the Datacom loads. The energy use would not be apportioned between exempt and non-exempt.

**Question No.3:** Is this interpretation correct?

**Answer No.3:** NO

**Comments No.3:** The exemption in the Standard states "equipment and portions of building systems that use energy primarily for industrial, manufacturing, or commercial processes." In your interpretation you state "the majority of the plants' capacity and associated energy use was associated with the Datacom loads". The words primarily and majority have the same meaning. Therefore, in the case you describe the system would be exempt.

**Interpretation No. 4:** Further, in all cases the energy use associated with these exempt systems would be treated the same as process loads. In particular, they would be equal in both the Proposed Building Design and the Budget Building Design simulations.

**Question No.4:** Is this interpretation correct?

**Answer No.4:** NO

**Comments No.4:** The interpretation above is largely correct but is incomplete. 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. Portions of the building that are not served by the exempt chilled water system are available for trade-offs within Section 11. This interpretation also applies to Section 11 of 90.1-2007 as well as Appendix G of 90.1-2004 but does not apply to Appendix G of 90.1-2007.