

**INTERPRETATION IC 90.1-2007-03 OF
ANSI/ASHRAE/IESNA STANDARD 90.1-2007
Energy Standard for Buildings Except Low-Rise Residential Buildings**

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Request from: Eric Vieira, EI (EVieira@cea-engineers.com), Consulting Engineering Associates, Inc., 8365 Gunn Highway, Tampa, FL 33626.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE/IESNA Standard 90.1-2007, Section G3.1.2.2, regarding unmet load hours for the proposed design and baseline building designs.

Background: When modeling under the Performance Rating Method, Section G3.1.2.2 of the Standard states that "Unmet load hours for the *proposed design* or *baseline building designs* shall not exceed 300 (of the 8760 hours simulated), and unmet load hours for the *proposed design* shall not exceed the number of unmet load hours for the *baseline building design* by more than 50. If unmet load hours in the *proposed design* exceed the unmet load hours in the *baseline building* by more than 50, simulated capacities in the *baseline building* shall be decreased incrementally and the building resimulated until the unmet load hours are within 50 of the unmet load hours of the *proposed design*."

According to this requirement, the unmet hours for the proposed building shall not exceed the unmet hours for the baseline building by more than 50 hours. If the unmet hours of the proposed building does exceed that of the baseline building by more than 50, incrementally decreasing the simulated capacities of the baseline building will result in an increase in the unmet hours of the baseline building.

This requirement appears to only cover the situation when the unmet hours of the proposed building is greater than that of the baseline building. Therefore if the unmet hours of the proposed building are less than that of the baseline building, then it may be so by any differential value.

Interpretation: The unmet hours for the *proposed design* may be less than that of the *baseline building design* by any differential amount.

Question: Is this interpretation correct?

Answer: No

Comments: The unmet load hours for the *proposed design* may be less than that of the *baseline building design* by no more than 300 hours.

The unmet load hour differential between the *proposed design* and *baseline building design* may be greater than 50 hours when the *proposed design* unmet load hours are less than the *baseline building design*. However, unmet load hours for the *proposed design* or *baseline building design* shall not exceed 300 hours which limits the maximum differential when the *proposed design*

unmet load hours are less than the *baseline building design* to 300 hours. The percentage improvement of the *proposed design* performance rating will be understated when the *proposed design* unmet load hours are less than the *baseline building design* so it is usually more beneficial to the project to minimize this differential. The *proposed design* unmet load hours are not allowed to exceed the *baseline building design* unmet load hours by more than 50 in order to prevent overstating the percentage improvement of the *proposed design*.