

**INTERPRETATION IC 90.1-2007-25 OF  
ANSI/ASHRAE/IESNA STANDARD 90.1-2007  
Energy Standard for Buildings Except Low-Rise Residential Buildings**

**Date Approved: June 30, 2014**

**Request from:** Bruce Hauschild ([bruce.hauschild@nebraska.gov](mailto:bruce.hauschild@nebraska.gov)), Nebraska Energy Office, 521 South 14<sup>th</sup> Street, Ste 300, Lincoln, NE 68508.

**Reference:** This request for interpretation refers to the requirements presented in ANSI/ASHRAE/IESNA Standard 90.1-2007, Sections 2.3c and 3, regarding the requirements for a greenhouse installed on the roof of a commercial building.

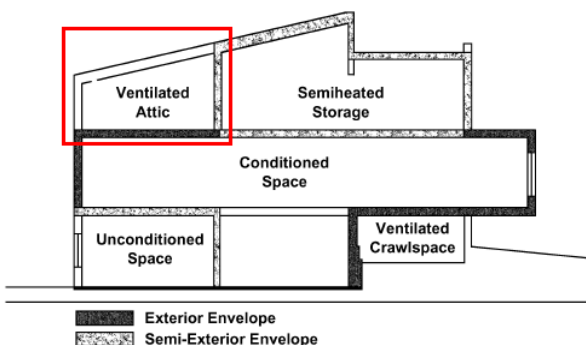
**Background:** A roof, or portion of a roof, of a building with spaces that fall within the scope of ASHRAE Standard 90.1, can have a greenhouse installed on that roof. Per Section 2.3.c, the greenhouse itself would be exempt from meeting the requirements of Standard 90.1, because this would be a portion of the building system that uses energy primarily to provide for a commercial process.

**Interpretation:** The greenhouse is exempted from meeting the requirements of Standard 90.1 based on Section 2.3c, the floor of the greenhouse, which is the roof of the spaces below that are within the scope of 90.1, becomes part of the building envelope, and must meet the requirements of 90.1 as a roof/ceiling of those spaces within the scope.

**Question:** Is this interpretation correct?

**Answer:** Yes

**Comments:** Assuming the greenhouse, lighting system and mechanical equipment are used to only grow plants that are sold so the space qualifies as a commercial process per Section 2.3c, (and that there are no other mechanical systems not supporting the commercial process with a capacity exceeding that specified in section 2.2.a), the Committee agrees with the interpretation that the roof underneath the greenhouse must comply with the criteria for the building envelope, and considers the greenhouse on the roof to be similar to a ventilated attic as shown in Figure 5.5.2 shown below.



**Figure 5.5.2** Exterior and semi-exterior building.