| v3 - LEED 2009

Thermal comfort - design

EQc7.1 | Possible 1 point

Glossary

Intent

To provide a comfortable thermal environment that promotes occupant productivity and well-being.

Requirements

Design heating, ventilating and air conditioning (HVAC) systems and the building envelope to meet the requirements of one of the options below:

Option 1. ASHRAE standard 55-2004 or non-U.S. equivalent

Meet the requirements of ASHRAE Standard 55-2004, Thermal Comfort Conditions for Human Occupancy (with errata but without addenda[1]). Demonstrate design compliance in accordance with the Section 6.1.1 documentation. Projects outside the U.S. may use a local equivalent to ASHRAE Standard 55-2004 Thermal Comfort Conditions for Human Occupancy Section 6.1.1.

Option 2. ISO 7730: 2005 & CEN standard EN 15251: 2007

Projects outside the U.S. may earn this credit by designing heating, ventilating and air conditioning (HVAC) systems and the building envelope to meet the requirements of International Organization for Standardization (ISO) 7730: 2005 Ergonomics of the thermal environment, Analytical determination and interpretation of thermal comfort using calculation of the PMV and PPD indices and local thermal comfort criteria; and CEN Standard EN 15251: 2007, Indoor environmental input parameters for design and assessment of energy performance of buildings addressing indoor air quality, thermal environment, lighting and acoustics.

For natatoriums, demonstrate compliance with the “Typical Natatorium Design Conditions” defined in Chapter 4 (Places of Assembly) of the ASHRAE HVAC Applications Handbook, 2003 edition (with errata but without addenda [1]).

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[1] Project teams wishing to use ASHRAE approved addenda for the purposes of this prerequisite may do so at their discretion. Addenda must be applied consistently across all LEED credits.