LEED O+M: Existing Buildings | v2009

Indoor air quality best management practices - increased ventilation

EQc1.3 | Possible 1 point

Intent

To provide additional outdoor air ventilation to improve indoor air quality (IAQ) for improved occupant comfort, well-being and productivity.

Requirements

Case 1. Mechanically vented spaces

Option 1. ASHRAE standard 62.1-2007 or non-U.S. equivalent

Increase outdoor air ventilation rates for all air-handling units serving occupied spaces by at least 30% above the minimum required by ASHRAE Standard 62.1-2007 (with errata but without addenda) as determined by IEQ Prerequisite 1: Minimum Indoor Air Quality Performance. Projects outside the U.S. may use a local equivalent to ASHRAE Standard 62.1-2007 if used in IEQ Prerequisite 1: Minimum Indoor Air Quality Performance.

OR

Option 2. CEN standard EN 15251: 2007

Projects outside the U.S. may increase breathing zone outdoor air ventilation rates to all occupied spaces by at least 30% above the minimum rates required by Annex B of Comité Européen de Normalisation (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, determined by IEQ Prerequisite 1, Minimum Indoor Air Quality Performance.

Case 2. Naturally vented spaces

Determine whether natural ventilation is an effective strategy for the project by following the flow diagram process in Figure 2.8 of the Chartered Institution of Building Services Engineers (CIBSE) Applications Manual 10: 2005, Natural Ventilation in Non-domestic Buildings.

AND

Option 1. CIBSE or non-U.S. equivalent

Show that the natural ventilation systems design meets the recommendations set forth in the CIBSE manuals appropriate to the project space.

Path 1

Use CIBSE Applications Manual 10: 2005, Natural Ventilation in Non-domestic Buildings. Projects outside the U.S. may use a local equivalent.

Path 2

Use CIBSE AM 13:2000, Mixed Mode Ventilation. Projects outside the U.S. may use a local equivalent.

OR

Option 2. Airflow Model

Use a macroscopic, multizone, analytic model to predict that room-by-room airflows will effectively naturally ventilate, defined as providing the minimum ventilation rates required by ASHRAE Standard 62.1-2007 section 6 (with errata but without addenda), at least 90% of occupied spaces. Projects outside the U.S. may use Annex B of Comité Européen de Normalisation (CEN) Standard EN 15251: 2007, or a local equivalent to section 6 of ASHRAE Standard 62.1-2007 to define the minimum ventilation rates.