



Building Ventilation 902.2.1

Overview

2015 NGBS § 902.2.1 requires compliance with ASHRAE 62.2-2010. The 2015 NGBS includes the relevant 62.2 provisions in Appendix B.

2020 NGBS § 902.2 also requires compliance with ASHRAE 62.2-2010; the Consensus Committee did not revise the version of 62.2 even though there are two more recent versions (2013 and 2016) available.

Some buildings, because of local code requirements, may need to be compliant with more recent ventilation specifications, such as ASHRAE 62.2 – 2016. If that is the case, and a building also seeks NGBS Green certification, a strict interpretation of § 902.2 would require the building’s MEP to analyze the building’s ventilation in accordance with two versions of 62.2 (2010 for NGBS compliance and, in this example, 2016 for local code compliance). Yet this additional analysis would not yield a greener, better built building.

Consequently, if a building must comply with a more recent version of ASHRAE 62.2, we deem that ventilation compliance equivalent to compliance with ASHRAE 62.2-2010 *for NGBS Green certification purposes*. Verifiers must make a note on the verification report to declare the version of 62.2 that was used if it is other than 62.2-2010.

Analysis of 62.2 Versions

To inform our interpretation, staff analyzed the various versions of ASHRAE 62.2. The goal of the analysis was to answer the following questions:

1. What are the differences between 62.2-2010 and the later versions?
2. If ASHRAE 62.2 Section 4 of 2013, 2016, and 2019 are implemented in a building, would they also meet the requirements of 62.2-2010 Section 4?

The major difference between the versions is the ventilation rate between ASHRAE 62.2 2010 and later versions.

For continuous ventilation, ASHRAE 62.2-2010 Section 4: $Q_{tot} = 0.01 A_{floor} + 7.5(N_{br} + 1)$

For continuous ventilation, ASHRAE 62.2-2013, 2016 & 2019 Section 4: $Q_{tot} = 0.03 A_{floor} + 7.5(N_{br} + 1)$

As demonstrated by the above formulas, the later versions require a higher ventilation rate. Buildings compliant to later versions would still **meet and exceed** the ventilation rate requirement for 62.2-2010 Section 4.

The other major difference is that 62.2-2013, 2016, and 2019, have an optional infiltration credit in Section 4.1.2. An infiltration credit can be used to reduce the required mechanical ventilation for houses that have leakier envelopes. And, for houses with tighter envelopes, the mechanical ventilation would be right-sized to meet the minimum required ventilation rate. The credit is based on converting an envelope airtightness value to an effective annual infiltration rate using floor area, house height, and location of the house to capture the climatic conditions. This differs from 62.2-2010, which has an assumed building envelope infiltration rate built into the required mechanical ventilation rate.

Compliance Question:

Is compliance with ASHRAE 62.2-2013 or 62.2-2016 equivalent to ASHRAE 62.2-2010 for NGBS Green certification purposes?

Yes.

Interpretation by Home Innovation Research Labs for Green Certification

Buildings seeking NGBS Green certification and using the 2015 NGBS or the 2020 NGBS, can demonstrate 902.2 compliance in one of four ways:

1. Compliance with ASHRAE 62.2-2010 as written in NGBS § 902.2; or
2. Compliance with ASHRAE 62.2-2013 when required by the local jurisdiction; or
3. Compliance with ASHRAE 62.2-2016 when required by the local jurisdiction; or
4. Compliance with ASHRAE 62.2-2019 when required by the local jurisdiction.

When any version other than 62.2-2010 is used for compliance, the Verifier must include a note on the verification report to declare the version of 62.2 that was used.