EE 20:
CLARIFY STANDARDS FOR EQUIPMENT VENTING

New York City Fuel Gas Code
Proposal developed by the Energy & Ventilation Committee.

Summary

Issue:
Venting boilers to the sidewalls of buildings encourages the use of efficient appliances by reducing costs. However, sidewall venting is often rejected by building inspectors for reasons that are not clearly delineated by any agency guidelines. This creates an uncertainty that discourages contractors from installing efficient equipment.

Recommendation:
Establish physical criteria that clarify when sidewall venting is allowable and ensure these criteria are consistent with national practices.

Proposed Legislation, Rule or Study

Amendments to New York City Fuel Gas Code:
1. Amend subdivision 2 of section 503.8 as follows:

   2. Where permitted, through-the-wall vents for Category II and IV appliances and non-categorized condensing appliances shall not terminate over public walkways or over an area where condensate or vapor could create a nuisance or hazard, as delineated by physical criteria established by the department, or could be detrimental to the operation of regulators, relief valves or other equipment. Where local experience indicates that condensate is a problem with Category I and III appliances, this provision shall also apply.

Supporting Information

Issues – Expanded
Condensing boilers and other condensing gas-fired equipment are substantially more efficient than traditional, non-condensing designs. They have the added advantage that the exhaust is cooled to temperatures where it is not dangerous to the touch. Further, because condensing equipment is intrinsically clean burning, the exhaust is not noxious. Accordingly, there has been a dramatic increase in the availability of equipment designed to exhaust directly through a wall of the building, rather than using a stack reaching up to the roof.

One nuisance that can result from this sidewall venting is that the exhaust is saturated with water vapor, which can condense and drip. So, for example, if care is not taken, a drip in winter could lead to a trickle of water and then a layer of ice on a sidewalk. Clearly, care and discretion should be brought to bear on any installation. However, these concerns have led to a situation where the use of these efficient devices is fraught with risk for the installer or owner.

Sidewall venting is legal in New York City but is subject to constraints under the New York City Fuel Gas Code. As written, the Code gives great discretion to the building inspector to determine whether a particular installation is acceptable or not, and installers report many instances where inspectors have prohibited an installation for unclear reasons, or have even refused to approve an installation after it was installed in apparent accord with Code requirements. This has led to a situation where installers are reluctant to install this efficient equipment because of potential problems later. This proposal will clarify the conditions under which this equipment can be installed, lessening the uncertainty and encouraging its use.

Environmental & Health Benefits
Increased utilization of condensing equipment will result in decreased fuel use and lowered emissions of both greenhouse gases and Clean Air Act pollutants.

This proposal was found to have a low, positive environmental impact per building and to impact a small number of buildings. It was thus given an environmental score of 1.

This proposal was found to have a positive, indirect health impact.
Cost & Savings
This proposal is to clarify code requirements, and will therefore have no direct impact on construction costs.

Precedents
Several national codes have implemented installation and safety guidelines for sidewall ventilation of HVAC equipment in response to the growing number of HVAC products that have been designed for sidewall venting. NFPA 54 Section 12.9 and NFGC Section 12.9 provide standards for through-the-wall ventilation.\(^1\)

LEED
This will make achievement of LEED Energy and Atmosphere points easier.

Implementation & Market Availability
There are no implementation issues for this proposal.

ENDNOTES: