GEW93-14
606.7

Proponent: Brenda Thompson, Chair, representing Sustainability, Energy, High Performance Code Action Committee (SEHPCAC@iccsafe.org)

Delete without substitution:

~~**606.7 Kitchen exhaust systems.** Kitchen ventilation and exhaust systems shall be in accordance with the *International Mechanical Code* and this section. Kitchen ventilation systems that deliver conditioned supply air to any space containing a kitchen hood shall not be capable of exceeding the greater of the following:~~

1. ~~The ventilation rate required to supply the space conditioning load; or~~

2. ~~The hood exhaust flow minus the available transfer air from adjacent spaces. For the purposes of this section, available transfer air is considered to be that portion of outdoor ventilation air not required to satisfy other exhaust needs, such as restrooms, and not required to maintain pressurization of adjacent spaces.~~

~~Where the total hood exhaust airflow rate of kitchen hoods in the space is greater than 5,000 cfm (2360 L/s) each hood shall have an exhaust rate in not greater than 110 percent of the minimum exhaust rate required by the *International Mechanical Code* and the ventilation system shall comply with one of the following:~~

1. ~~Not less than 50 percent of replacement air is transfer air that would otherwise be exhausted.~~

2. ~~Demand ventilation systems that are capable of reducing exhaust and replacement air system airflow rates by not less than 50 percent for not less than 75 percent of the exhaust air. The demand ventilation system shall include controls necessary to modulate airflow in response to appliance operation and to maintain full capture and containment of smoke, effluent and combustion products during cooking and when idle.~~

3. ~~Listed energy recovery devices with a sensible heat recovery effectiveness of not less than 40 percent shall be provided for not less than 50 percent of the total exhaust air.~~

~~Where a single hood, or hood section, is installed over appliances with different duty ratings, the maximum allowable flow rate for the hood or hood section shall be based on the requirements for the appliance with the highest duty rating located under the hood or hood section.~~

~~**Exception:** Where not less than 75 percent of the replacement air provided by the kitchen ventilation and exhaust system is transfer air that would otherwise be exhausted, the provisions of this section shall not apply.~~

Reason: This proposal was submitted by the ICC Sustainability Energy and High Performance Code Action Committee (SEHPCAC). The SEHPCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance International Codes with regard to sustainability, energy and high performance as it relates to the built environment included, but not limited to, how these criteria relate to the International Green Construction Code (IgCC) and the International Energy Conservation Code (IECC). This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. In 2012 and 2013, the SEHPCAChas held six two-day open meetings and 50 workgroup calls, which included members of the SEHPCAC as well as any interested parties, to discuss and debate proposed changes and public comments. Related documentation and reports are posted on the SEHPCAC website at: http://www.iccsafe.org/cs/SEHPCAC/Pages/default.aspx.

Code change CE220-13 was approved in 2013. It results in new kitchen exhaust provisions being added to the IECC. Therefore, the provisions in the IgCC are not a significant energy improvement over the IECC. The SEHPCAC proposes to delete the provisions. If other proponents pursue proposals which will take the new IECC provisions and enhance their energy savings when applied under the IgCC, the SEHPCAC will consider withdrawal of this proposal. The text of the IECC kitchen exhaust provisions for 2015 are as follows:

C403.2.8 Kitchen exhaust systems. Replacement air introduced directly into the exhaust hood cavity shall not be greater than 10 percent of the hood exhaust airflow rate. Conditioned supply air delivered to any space containing a kitchen hood shall not exceed the greater of the ventilation rate required to meet the space heating or cooling load or the hood exhaust flow minus the available transfer air from adjacent space where available transfer air is considered that portion of outdoor ventilation air not required to satisfy other exhaust needs, such as restrooms, and not required to maintain pressurization of adjacent spaces.

Where total kitchen hood exhaust airflow rate is greater than 5,000 cfm (2360 L/s), each hood shall be factory-built commercial exhaust hood listed by a nationally recognized testing laboratory in compliance with UL710. Each hood shall have a maximum exhaust rate as specified in Table C403.2.8 and shall comply with one of the following:

1. Not less than 50 percent of all replacement air shall be transfer air that would otherwise be exhausted.
2. Demand ventilation systems on not less than 75 percent of the exhaust air that are capable of no less than a 50 percent reduction in exhaust and replacement air system airflow rates, including controls necessary to modulate airflow in response to appliance operation and to maintain full capture and containment of smoke, effluent and combustion products during cooking and idle.
3. Listed energy recovery devices with a sensible heat recovery effectiveness of not less than 40 percent on not less than 50 percent of the total exhaust airflow.

Where a single hood, or hood section, is installed over appliances with different duty ratings, the maximum allowable flow rate for the hood or hood section shall be based on the requirements for the highest appliance duty rating under the hood or hood section.

Exception: Where not less than 75 percent of all the replacement air is transfer air that would otherwise be exhausted

TABLE C403.2.8
MAXIMUM NET EXHAUST FLOW RATE, CFM PER LINEAR FOOT OF HOOD LENGTH

Type of Hood	Light Duty Equipment	Medium Duty Equipment	Heavy Duty Equipment	Extra Heavy Duty Equipment
Wall-mounted canopy	140	210	280	385
Single island	280	350	420	490
Double island (per side)	175	210	280	385
Eyebrow	175	175	NA	NA
Backshelf/Pass-over	210	210	280	NA

For SI: 1 cfm = 0.4179 L/s; 1 foot = 305 mm
NA = Not Allowed

Cost Impact: Will not increase the cost of construction. The proposal removes a requirement which is duplicative of a requirement in the IECC.

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