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STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

2015 Washington State Energy Code Development

Energy Code Proposal Short Form

For editorial **Coordination, Clarifications & Corrections** only,
without substantive energy or cost impacts

Code being amended: ☒ Commercial Provisions ☐ Residential Provisions
(A MS Word version of the code is linked to the name)

Code Section # C403.7.7.1.3

Brief Description:

Reorders demand control ventilation on kitchen hoods to increase clarity and require it on hoods over 2,000 CFM rather than provide options that are not often used in the market.

Proposed code change text: (Copy the existing text from the Integrated Draft, linked above, and then use underline for new text and ~~strikeout~~ for text to be deleted.)

C403.7.7.1.3 Kitchen exhaust hood system. Kitchen exhaust hood systems serving Type I exhaust hoods shall be provided with demand control kitchen ventilation (DCKV) controls w~~W~~here a kitchen or kitchen/dining facility has a total Type I kitchen hood exhaust airflow rate greater than 2000 cfm~~,~~. DCKV systems shall be configured to provide a minimum of 50 percent reduction in exhaust and replacement air system airflow rates. Systems shall include controls necessary to modulate exhaust and replacement air system airflows in response to appliance operation and to maintain full capture and containment of smoke, effluent and combustion products during cooking and idle operation. ~~it 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 total exhaust hood airflow that are configured to provide not 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 hood airflow.~~

Exceptions:

~~1. Where not less than 75 percent of all the replacement air is transfer air that would otherwise be exhausted.~~
~~2.~~1. UL 710 listed exhaust hoods that have a design maximum exhaust flow rate no greater than 250 cfm per linear foot of hood that serve kitchen or kitchen/dining facilities with a total kitchen hood exhaust airflow rate less than 5000 cfm.
~~3. Type II dishwasher exhaust hoods that have an exhaust airflow of 1000 cfm or less.~~
2. An energy recovery device is installed on the kitchen exhaust with a sensible heat recovery effectiveness of not less than 40 percent on not less than 50 percent of the total exhaust hood airflow.

Purpose of code change:

Demand control kitchen ventilation has been commonplace on make-up air hoods for years. Previously the WSEC allowed DCKV as one of the control strategies to comply with kitchen exhaust controls, along with energy recovery, or where 50% of the replacement air was being transferred. This proposal removes the various compliance paths by mandating DCKV on hoods of 2000cfm or greater unless they have an energy control device, or are UL-710 hoods with a maximum 250 cfm/lf flowrate. This cleans up the section to make it clearer and moves less common compliance paths to exceptions rather than in the charging language. It also removes the easily achievable transfer air requirement of 50% as a compliance option which will encourage DCKV systems in more restaurants.

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Instructions: For use with Coordination, Clarifications & Corrections **ONLY**. Send this form as an email attachment, along with any other documentation available, to: sbcc@ga.wa.gov. For further information, call the State Building Code Council at 360-407-9277.