

DOCKETED

Docket Number:	21-BSTD-01
Project Title:	2022 Energy Code Update Rulemaking
TN #:	238399
Document Title:	Taylor Engineering Comments - Revise 1201(c)1 filtration requirements
Description:	N/A
Filer:	System
Organization:	Taylor Engineering
Submitter Role:	Public
Submission Date:	6/21/2021 4:53:18 PM
Docketed Date:	6/21/2021

Comment Received From: Taylor Engineering
Submitted On: 6/21/2021
Docket Number: 21-BSTD-01

Revise 1201(c)1 filtration requirements

1. This section requires that recirculated air (as well as outdoor air) be filtered to MERV 13. I don't recall reading any research that supports this requirement given the types of spaces fallig under these sections seldom have any particle generating processed. Note that even MERV-13 on outdoor air has only weak research evidence to support it but we have all just decided it makes sense anyway for outdoor air, but not for recirculated air. Having this requirement results in exception i being added to pick up systems that cannot have filters such as active chilled beams, fan-powered convectors, etc.. But not captured in this exception are recirculating fan-coils and fan-powered mixing boxes where ductwork often exceeds 10 feet. I know of no research that supports the notion that 10' of ductwork gets dirty and creates a health risk but 10' does not. Fan-powered boxes will become more popular with electrification since they are commonly paired with electric resistance heaters and can reduce reheat energy use due to the fan providing the airflow needed for heating, and they eliminate hot water piping losses, such that electric resistance heat can be as energy efficient as central HW heat pumps. So the CEC should not discourage this system by adding onerous filtration requirements " the fans on these terminal units generally cannot handle the added pressure drop of MERV 13 filters. Note that neither ASHRAE 62.1 nor LEED requires filtration of recirculated air. So this section should be rewritten to only require outdoor air filtration. That would allow exceptions and qualifications to be deleted. If equipment protection is considered an energy issue, then also require coils to be protected with MERV 8 per ASGRAE 62.1.
2. Wherever "MERV" is referenced, it should be changed to MERV-A, i.e. require filters to be tested after being preconditioned using ASHRAE 52.2 Appendix J. There are many filters on the market, especially the inexpensive 1" and 2" filters, that meet MERV 13 by creating a static charge on the media that causes an "initial" efficiency of MERV 13, but the charge readily dissipates and performance typically falls well below MERV 11.
3. AHRI Standard 680 applies only to residential equipment. This section applies to commercial buildings. So that standard should be deleted " only include MERV-A per ASHRAE 52.2.
4. Item C.i. should say "Filters with a nominal depth of 2 inches or more." Certainly there is no intent to outlaw deeper filters.