

IECC/DGC Energy Committee Supplemental Hearing #4 Minutes

Tuesday 4-26-2022 (11:00 am – 1:00 pm, Via MS Teams)

Attendees:

Name of Committee Member	Organization	In Attendance?
Carol Pafford	City and County of Denver (CCD)	
Christy Collins	CCD	X
Chuck Bartel	CCD	X
Allen Yanong	CCD	X
Courtney Anderson	CCD	
Eric Browning	CCD	X
Antonio Navarra	CCD	X
Tom Gleason	CCD	X
Robby Schwarz	BUILDTank Inc.	
Bill Rectanus	Thrive Home Builders	X
John Burns	StanTec	X
Jeff Slaugh	EcoLogic	X
Kevin Eronymous	SAR Architects	X
Linda Morrison	Mead Hunt	
John Arent	Noresco	X
Elizabeth Gillmor	Energetics	X
Aaron Esselink	Xcel Energy	X
Mark Rodriguez	Sun Run	X
Mark Jelinski	RMH Group	X
Mike Fulton	Western Mechanical Solutions	X
Nathan Kahre	Energy Logic	X

Eric Browning (moderator) provided introductory comments and instructions on format of supplemental hearing and group moved into first agenda item. Those proposals not heard will be deferred to a future supplemental hearing unless noted otherwise.

a. #P12.4 C403.8 - Fans and fan controls: Mike Fulton

Introduction and presentation by Mike F. Question from C. Bartel about real world application of 'particle or gas concentration'. Mike F. answered that this was part of the national proposal and coordination with Broan led to this language. Eric B asked about conflicts with humidistat and time for switch. Chuck B asked about light and fans being on same switch in commercial uses. Mike F responded that it would not be an issue. Mark J suggested item 4 be removed. Mike did not object, though commented it would not align with national proposal. Chuck found code language RE: light and fan shutting off in 20/ 30 minutes. Chuck also supported removing #4. John A. noted that 'vacancy sensor' is common terminology. Mike F responded that it could be auto on or switch on with timer off. Not a preference for either. Could be an option. John A thought there could be a question in intent. Mark F suggested "Manual or automatic on capability". Change 30 minutes to 20 in Item 2.

Mike F asked if this could be applied to Residential. Eric B suggested we take this to full Committee. Nathan K commented that cost for lighting or residential controls are higher. Said he's worked with Broan and Panasonic and is a good idea in general but will likely be objection from builders. Group had majority consensus to approve with three changes noted.

b. #95 DGC 701.4.2 HVAC Minimum Efficiencies: John Arent

John A introduces. Said it is intended to promote 'good practice'. Fed preemption does not allow more efficient equipment. Look at smaller packaged equipment. Requires greater efficiencies (SEER, EER, SEER-2). Look at 75-80% improved efficiency. (Equipment in 20% range.) Can lead to increased specification of equipment and through volume, drive down cost. Elizabeth asked about item c, and if intent was only packaged unitary equipment, and John said yes it is. John said the proposal was written with a narrow scope on purpose. Elizabeth asked about pTAC and vTACs (include or exclude)? John said intent is to exclude. Elizabeth noted there are not any. John agreed they are pretty inefficient. The efficiencies are still not top of the line (the best). Elizabeth was inquiring if it is intended for air cooled only or water cooled too? Proposed to change "c". Eric asked if we would want to use evaporative cooling due to opportunity of water. Mark J acknowledged pushing the envelope on specific equipment (which is available) – but manufacturer's / local contractors might have problems sourcing the units. (Not an objection – just a note.) Mark J suggested using same language from base code as defined in reference to AAHRI. (Stay 'certified'.) Limit to air-cooled for now for "c". Elizabeth asked for clarification within different subsections. Align with tables from model code. Chuck B suggested putting it in table format. John A agreed to edit and send final draft back to the city.

c. #77.2 DGC Waste Heat Recapture: John Arent

John A introduced and noted cost-benefit could be questioned. Proposal related to R-2 only with 4 or more showers on a shared drain line. Mark J asked if intent is to do more than copper tubing on length of pipe? John A said, no – that is the intent. Counter flow to heat exchanger. Just passive heat recovery device. Mark J indicated these are pretty efficient. Commented that showers are great and can work well on hot/cold water lines. Also good for gang showers. Poor for 'recirculation' with long runs. Cost of copper vs. return on investment. John A asked if there was a better way to format the language?

Chuck B commented that the code language is difficult to read and apply. Others agreed. Chuck B noted that the intent was not as clear as it needs to be in terms of where it applies. Also where it is required/allowed. What about other occupancies (not R-2) that use central systems? Reference to UPC should be IPC. Don't limit laundry facilities to just R-2. Allow other commercial laundry facilities. Consider changing IAPMO references to those correlated with I-Codes. Change 2018 IPC to 2021 IPC. Have to be careful that drain flow is not restricted. Chuck noted that there is a 10 psi pressure loss limit in IECC – do we need to copy it over to DGC? Eric asked if it was intentional to exclude R-1's or if inconsistency of occupancy was an issue. Noted floor-to-floor height for R-1. Chuck noted R-1 could be included since language doesn't exclude them. Also R-1 are almost always central water so big opportunity to use this. Need an Applicability section for this amendment. Chuck said there's an exception for single story buildings in CA T-24 due to challenges in installation. John agreed exception for single story is a good idea. Elizabeth asked if there's a quantity requirement (is there a % of drain heat that has to be recovered). John A said that showers are the minimum. Eric asked what to do with next steps? Come back to supplemental committee or not? Chuck B said it's a good concept. Voiced thought to come back to the supplemental committee. Majority agreed.

Eric B acknowledged time and offered to take any proposals out of order. Mark J suggested we move to economizers (Item f) and group had no objections.

d. #74.2 Congregate Roof Penetrations: John Arent

not heard

e. #62 C402.5 Air Barrier Testing: John Arent

not heard

f. #57 C403.5 – Economizers: John Arent

John A presented and talked through intent and Exceptions. Changes will impact small and medium buildings and reduces energy use and increases performance. Elizabeth G asked about Exception 8, 2nd half of sentence. i.e., small office buildings. John A indicated need to clarify when this is applicable. Wants to make sure typical split system is excluded from requirement to have an economizer. Elizabeth agrees, and said key focus is related to supply of OA. Mark J noted Exception 8 seems to reduce the efficiency. But supports requiring economizer when capacity is > 54,000 Btu/hr. Elizabeth observed that proposal has biggest impact on those systems between 33 and 54 kBtu/hr. Mark J revised his prior statement as having misread the proposal. Talked about different types of systems and opportunity to open outside air damper. Distinguished between heat recovery system VRF. Commented that some systems are misrepresented by the manufacturer when considering cold temperatures. Mark proposed deleting Exception 7. John acknowledged issues. Chuck B noted that the Commentary for Ex # 7 DOAS with OA system would have to be oversized when running in economizer mode and energy savings weren't there. That's why #7 exists. John said we don't want to give VRF systems a pass. Chuck said challenge is allowing prescriptive vs. requiring performance path. Mark J said if VRF systems make it heat recovery pump type. In CA, don't have to worry about -5-degrees and needing cooling. But in CO

we do. Chuck said there are other systems where same challenges exist for #7. Re: C403.5.1, maybe don't need to pull same ASHRAE language forward as it's just a duplicate. Don't bring 2.2 forward. RE: for 2.1, Chuck asked if units that small have fault detection? Eric and Chuck noted 2nd 33,000 Btu/hr in 2.1 needs to be 54,000 Btu/hr. Chuck commented that ASHRAE Ex # 12 may relate to IECC Ex # 8. Majority of group agreed to move forward.

g. #26 DGC 701.4.8 Unregulated energy uses: John Arent

not heard

h. #26b 701.5 - Solar Contribution to EUI targets: John Arent

not heard