IECC/DGC Energy Committee Hearing Meeting Minutes # 3

February 24, 2022

2 p.m. – 5 p.m.

City and County of Denver

1. Roll Call and Introductions

Name of Committee Member		In Attendance?
Aaron Esselink		X
Carol Pafford		X
Chris Parr		
Chris Spelke		
Christy Collins		X
Chuck Bartel		X
Allen Yanong		X
Courtney Anderson		X
Elizabeth Gillmor		X
Eric Browning		X
Jamy Bacchus		X
John Burns		
Ken Urbanek		X
Adam Lyons		X
Nate Huyler		X
Curtis Underwood		X
John Dutch		X
Jeff Crowe		
Linda Morrison		X
Mike Walton		X
Nathan Kahre		
Paul Kriescher		X
Paul Schaffer	**One vote**	
Robert Pruett		X
Antonio Navarra		X
Shanti Pless		
Chuck Kutscher		X
Mark Rodriguez		X
Bill Rectanus		X
Bryan Kazin		X
Paul Kancir	**One vote**	
Curtis Werner		X

Stephen Sanderson	**NON-VOTING**	X
Alex Martin	**One vote**	
Kevin Eronimous		X
Laura London		X

27 Voting members present

2. Introduction of key proposals of **IECC/DBC-Commercial and DGC Ch.7 (non-voting)**
    a. #6 C406 Calibrate to Denver's Goals
        - **Summary**: Does 2 things. 1 Collapses all tables in C406 into a single table. 2 Calibrates the credit requirements to Denver's goals instead of just the baseline requirements. Additional credit options are added.
        - **Feedback/Questions**: The incentive is to go all electric and there are certain projects you cannot do without gas, such as hospitals. We need to make sure we have an exclusion for emergency power.
        - If there are sections of the credit table that become mandatory, the credit table will need to be updated.
        - Is the increased demand for electricity being contemplated? On the grid, in general, peak and total capacity has excess production. We can spread out that excess when it is not being used. There is still a need to manage load, so it doesn't coincide with peak. It is possible to add load and reduce emissions.
        - Is this the only amendment that has these definitions? (All-electric building & Combustion Equipment) - It is not.
        - Why do the 4-7 stories require many more credits? The reason different buildings have different credit requirements is because this is the data we have. High rise apartments tend to be more efficient per sq. ft. because they are denser. Large offices tend to be more intensive because of the equipment that goes in them.
    b. #4 C103.2 Minimum Renewable Energy

- **Summary**: Sets the minimal amount of renewable energy that needs to be provided to buildings. Target is set at 20% with a series of exemptions that are structured as alternative adherence paths.
- **Feedback/Questions**: It would be a good idea to address mixed-use buildings, maybe through pro rating.
- Confused by the math. Denver's goal is to be at 100%, excel energy is providing 80% and the building is 20%. However, 80% of the 80% provided by excel energy is non-renewable. So, is it not truly 100% renewable energy?
- As far as enforcement for offsite renewable, how are the renewals enforced? Answer: There might be a phrase missing on the proposal, but the intent is for the city to not have to enforce the renewals every 5 years.
- Is there a study to lower the 20% for certain buildings? Some developers might see it as a liability and choose not to build in Denver. Answer: Right now, it is structured so certain buildings can have alternatives to help buildings implement something on site that would provide the value of onsite renewable energy.
- 1.26 gigawatts of solar to have all buildings comply. Don't see it as something tangible. Reply: Excel energy plans to have around 5 gigawatts of solar available by 2024.

c. #18 C401.2 Limit Modeling to Appendix G

- **Summary**: 1 - It limits the modeling path in Denver to appendix G only. 2 - it calibrates that path to Denver's goals. 3 - Creates a new section C407 that tells how to use appendix G in Denver.
- **Feedback/Questions**: Be very clear as to which version of ASHRAE 90.1 you are referring to.
- Appreciate the definition which contained "pEUI"
- The problem Denver is going to face is if we standardize these loads,

they are going to be inaccurate. There isn't enough physical room on a site to make a McDonalds, for example, to reduce their energy loads.

- Would you recommend COMNET? COMNET is the best set of standard variables we have but it is a bit outdated. In the past, we have always recommended COMNET.
- How many permits have gone through the permit cycle that have used appendix G? Answer: Very rarely.

3. Discussion and voting on **IECC/DBC-Commercial and DGC Ch.7**

a. #77.2 DGC 701.4.4.4 Waste heat recapture (Tabled)

- Motion: Motion to table items #77.2 and #P45 to the next hearing.
  - **Vote Passed:** (21 for, 0 against, 2 abstentions)

b. #P45 C505/ R505 - Change in Occupancy (Tabled)

- Tabled per motion in previous item #77.2

c. #83 C403.1.2 / CC102 -Large Energy and Water Use for Building Restrictions

- Support
  - In support. Needs to also address direct evaporative cooling.
- Opposition
  - N/A
- Committee Questions/Comments
  - What water treatment is used and how can you ensure it doesn't have any health issues on air quality. Answer: The cooling tower doesn't come in contact with the building.
  - Why place this here, why not green code? Answer: We are trying to address energy efficiency progressively and it relates to water consumption. We want to address energy efficiency in data centers at a minimum. Green code is a voluntary code.
  - We are going to have to get away from using water for cooling. Is this possible using a cooling refrigeration? Answer: If we had

to we could, the alternative would be to rely on other cooling technologies.

- Can greywater be used with indirect evaporative cooling? Answer: Not sure, we would have to revisit.

- Support (Rebuttal)
  - To clarify, greywater is not going to be the answer here. There is just not enough greywater.
- Opposition (Rebuttal)
  - N/A
- Discussion: If you get into commercial office spaces, you might find yourself
- Motion: Motion to amend item #4 with "…utility recycle water when readily available to the site…", item 2 with "…for 10 tons of cooling per/room and above.", and item 3 with "…10 tons" with further intent to modify the MLC by a subcommittee.
  - **Vote Passed:** (21 for, 0 against, 4 abstentions)
- Motion to approve as amended
  - **Vote:** (19 for, 2 against, 5 abstentions)

d. #P36 C405.12 - Energy Monitoring
   - Proponent not in the meeting.
   - Motion: Motion to table
     - **Vote Passed:** (23 for, 1 against, 1 abstentions)

e. #P12.3: C403.7.4.2 – Spaces other than non-transient dwelling units
   - Motion: Motion to table to the next hearing
     - **Vote Passed:** (23 for, 0 against, 3 abstentions)

f. #P12.4: C403.8 – Fans and fan controls
   - Support
     - N/A

- Opposition
    - N/A
- Committee Questions/Comments
    - Why is there a discrepancy between the maximum shutoff time and the time tested? – The timing would be adjustable
    - Is the intent that this is not for multi-family? – Correct, but it seems to not be shown in the proposal.
    - This seems more fit for residential use, not so much commercial.
- Support (Rebuttal)
- N/A
- Opposition (Rebuttal)
- N/A
- Discussion:
- Motion: Motion to table until next commercial hearing.
- **Vote: Passed** (23 for, 0 against, 2 abstentions)

Hearing adjourned at 5:12PM