



IECC/DGC Energy Committee Hearing Agenda # 10

July 26th, 2022

2 p.m. – 5 p.m.

City and County of Denver ([via Zoom](#))

1. Roll Call – 20/31 Committee Members in attendance– Quorum achieved

Committee Member	In Attendance?
Aaron Esselink	X
Adam Lyons	
Allen Yanong	X
Antonio Navarra	
Bill Rectanus	X
Bryan Kazin	X
Carol Pafford	X
Chuck Kutscher	X
Chris Parr	
Curtis Underwood	Cannot attend
Chris Spelke (ONE VOTE)	
Ashleigh Wheeler	X
Christy Collins	X
Chuck Bartel (Danny Boncich as sub)	X
Courtney Anderson	X
Elizabeth Gillmor	X
Eric Browning	X
Jamy Bacchus	X
John Burns	
John Dutch	
Jeff Crowe	
Ken Urbanek	X
Laura London (ONE VOTE)	
Collin Anderson	X
Linda Morrison (ONE VOTE)	
Eric Rader	
Mike Walton	X
Mark Rodriguez	X
Nathan Kahre	
Nate Huyler	X
Paul Kriescher	X
Paul Schaffer (ONE VOTE)	

Robert Pruet	X
Shanti Pless	
Alex Martin (ONE VOTE)	
Kevin Eronymous	

2. Voting of key proposals for IECC/DGC

Residential

a. [#67](#) Minimum Renewables

- Public Support:
 - Maggie Thompson: City council and Mayor have made climate change a top priority. We know in order to meet the goals, we need new homes to be highly efficient and electric. Please amend this proposal to have a stronger electrification component to bring to city council
 - Jonny Kocher: Echoing what Maggie said, RMI has reservations on natural gas still being allowed in new buildings. Please amend this proposal to be stronger on electrification.
- Public Opposition: N/A
- Committee Questions:
 - Paul Kriescher: Potential to miss an opportunity here to strong encourage high efficiency electric heating and water heating. I have drafted an amendment to if a home were to include renewable energy and include all-electric space heating and water heating, should have a lower requirement to include renewable energy on their homes when compared to a natural gas home. If we don't address this, we are just kicking the can down the road.
 - Robby Schwarz: I don't disagree with Paul's comment, but just want to point out the first exception is set up to do what Paul is describing.
 - Mike Walton: Sizing requirement- how would we verify calculations?
 - Robby: Renewable energy no less than 2.4 KW /floor area of the dwelling unit, should be a standard way to create consistency on the construction documents.
 - Mike: How would the designer calculate that?
 - Robby: The system size is the requirement using that formula.
 - Paul: someone doing a energy rating should be able to use that to calculate the renewable energy or use Xcel energy standard tool? Was there a requirement to do modeling?
 - Courtney: It's not about the size of the system, it is about the output. Could come from a policy clarification. Site constraints need to be considered.
 - Carol: Not familiar with calculating the input, outside our area of expertise.
 - Elizabeth: Change to be a little more residentially

friendly. kWh/yr is more complex as you need to work through PVwatts. Suggest conveying 0.7 kWh/year to a specific area that way no one has to do the calc.

- Elizabeth: 0.7 kWh/year- where did that amount come from?
 - Courtney: Aligning with 10% annual energy consumption.
 - Paul: Do you know what was used as the reference?
 - John: For a flat roof, 1500-1800 kWh /year. Just under 1 kW of panel, keeping requirement low, if you're getting people to do it, they will likely do more like 2-4 kW/hr. Agree with simple sizing PV capacity/sqft.
 - Elizabeth: When the green roof ordinance was converted to the green building ordinance, which now has that your solar needs to cover a certain aarea. 1400 kWh /kW, Apply the same metrics across the board.
 - Christy: Support aligning the two GBO and IECC.
- Bill: kWh/yr is a relatively simple thing to do, so I don't think that will be a huge challenge for the building industry. What is going to give the greatest ability to meet the code. There are a lot of people that have their hands in the design and the roof form is something that everyone wants to put their finger on. I think kWh/yr is better so there is the ability to select the correct panel.
- Elizabeth: Much easier to design to 80sqft of PV than kwh. If you're put on high efficiency panels, once you make the investment in install PV, then best practice
 - Christy- We have the square footage requirements and the kwh, so that can be worked out.
- Chuck: PV Watts is easy to use and it's free. I would caution if we come up with a rule of thumb for placement of the panel. Would encourage electrification first.
- Carol: 25-30% of the PV proposals come from not local, small companies, will likely not be able to use PV watts or know about it
- Mark: Have a lot of experience in CA- they are based on kwh/sqft. It may make sense to stay in alignment. Typically the designer gets a HERS rating. The lang in CA talks about where to place the renewables, may be worth including.
 - John: Mark is right- CA regs are Kwh/sqft as well as snow loads. I don't think may 2000sqft would put on just 1 kwh. It is a way people to do PV without setting strict capacity requirements.
- Public Rebuttals: N/A
- Committee Discussion:
- Motion to make an amendment:
 - Paul: Proposing if natural gas, then proposing closer to 50% renewables. 10% for all-electric. If you don't want to electrify then you need to invest in solar.

- Eric: Exception needs clarification on the section references.
- Mike: Prescriptive points are modified, will this dis align the other compliance paths?
 - Paul: Did not think there was much of a los with the ERI score.
- Mike: Substantially changes renewable requirements, what about space requirements?
 - Paul: If using 300sqft of roof area on a 600 footprint, there should be substantial room to meet the load.
 - Elizabeth: Still extremely achievable. Will need to work a little harder to keep gas, similar to commercial buildings. I don't think a project will be able to meeting exception 4.
- Courtney: Still allows gas fireplace. Need to change exception- R408.10.5 and R408.10.4 to treat both space heating and water heating.
- Chuck seconds motion
 - Eric: From a user perspective, there are still too many sections reference with "and" and "or"
 - Elizabeth: are you open to adding square foot of solar array in addition to kWh?
 - Paul: I'd welcome those changes to make it easier for people that this would be new to.
 - Chuck: Strongly support this – I thought the public comments made really good points as it strongly encourages using the all-electric exception. Avoids decades of carbon emissions.
 - Elizabeth: 1400kwh/kw, every 80 sqft takes 1 kW= 0.12 sqft of panel per conditioned floor area of dwelling unit. Add as an option.
 - Chuck: I don't know that we need to put that requirement in there.
 - Eric: Which sub sections are intended to go together here?
 - R408.8.2 and R408.8.3 are together for space heating
 - R408.10.2 – 5 creates options
- Vote: 10 for, 3 opposed, 4 abstaining.
 - Motion Passed to amend.
- Motion to approve as amended.
 - Mark: Would add another exception based on international code level to include shading.
 - Courtney: Should not be an exception, put in the body of R404.4.
 - Elizabeth: Appendix RB- Areas of the roof that are in partial or fully shade for 70% of daylight hours annually should not be required to meet this requirement. – This does set it up to be required to do comply with one of the other exceptions.
- Vote: 13 for, 0 opposed, 4 abstaining.

Commercial

b. [#6](#) C406

- Public Support:
 - Mark Jelinske: Was on the working group. I like where it ended up, just a couple typos.
- Public Opposition: N/A
- Committee Questions:
 - Elizabeth: Did we get in the freeze protect?
 - Ken: Was in regard to section 403, not this section.
 - Elizabeth: I think it makes sense to align those two.
 - Mark: Came to the conclusion that it was not needed since this is space heating. It's very minimal what is needed for freeze protection.
 - Elizabeth: Plenum is a space and adds redundancy just to cover all
 - Ken: Did we vet out the exception 1 under other systems that can run at that COP level at 5 deg.
 - John: The feedback was that there were less products. With the NEEA database does call out a PTAC unit that can meet that requirement.
 - Ken: Since it's option, I don't think it's too much onerous.
 - Katrina: By 2025, there may be more products available.
- Motion to amend 406.12 to add exceptions 4 and 5 from 403 (proposal P40)
 - Ken: Keeps it consistent and clarify and add clean up of typos.
- Vote: 16 for, 0 opposed, 0 Abstaining
- Motion to approve as Amended:
 - Elizabeth: Very happy with where it landed in the quest for electrification.
- Vote: 16 for, 0 opposed, 0 Abstaining

Meeting Adjourned at 4:05pm