

Commercial Prescriptive Path and Renewables Working Group

Meeting #1

May 17th, 2022

3 p.m. – 4 p.m.

1. Introductions:

- a. CASR: Katrina Managan, Courtney Anderson, Jonny Rogers, Sharon Jaye
- b. CPD: Eric Browning, Chuck B, Robert Pruett, Antonio Navarra
- c. Attendees: Sean Denniston (NBI), Elizabeth Gillmor (Energetics), Ian Wilson (4240 Architecture)

2. Review of Denver's Goals and Related Policies:

- a. C406
- b. Renewables

3. Introduce Proposals:

- a. [#6](#): C406 Calibrate to Denver's Goals
 - Changes stringency
 - 1. Makes C406 Denver specific; condenses into single table for single climate zone
 - 2. Instead of requiring 10 points, it sets separate credit targets for different building types; Different building types are either closer or further away from NZE goals, so it sets different building type targets;
 - 3. Encourages electrification; All electric buildings would need to meet just 10 credits.
- b. C406 related proposals
 - These proposals don't add stringency, they add flexibility
 - [#10](#) Remove Credit limit for premium cooling
 - [#12](#) Premium Air tightness
 - [#16](#) Enhanced Envelop UA
 - [#101](#) C406 Electrification Option
 - [#8](#) Premium Heating
- c. [#4](#): IECC C103.2 – Minimum Renewables

- There's interaction between C406 and renewables proposal; Impact of this proposal is substantial
- Starts with series of definitions and based largely on 2024 IECC proposal moving forward now
- Documentation requirements
- Create requirement that 20% of buildings annual energy use; May not be possible or feasible on some buildings
 - Exemptions
 - 1. All-electric properties
 - 2. Buildings that achieve more efficiency measures
 - 3. Off-site
 - Different energy uses for different building types
 - A project can comply prescriptively through C407
 - Mutually exclusive with other locations with renewable energy; no double counting
 - C406
 - High output water heating systems

4. Summary of topics discussed:

a. C406:

- Calibration/Stringency
 - Each credit is worth .25% of efficiency gains
- Elizabeth –
 - Can we focus on base code and not DGC?
 - Eric – DGC sets a higher standard. We would vote on them separately. If language of IECC is not approved, there would be revisions to DGC
 - Hard to know how this will fit in with everything else; Should be last; without understanding foundation that it will be resting on; C407 and renewables
 - No problem with the structure itself
 - Group B aligns with model code; What are we getting from Denver? Where do Group R & I come from and differ from model code?
 - Doesn't see the relationship of midrise vs highrise vs hotels?

- Sean
 - Comes from NZE Implementation Plan
 - Sean – IECC doesn't deliver same level of performance in different buildings; Other buildings have not
 - NZE Implementation plan did an analysis of stringency of building types and different buildings types will need to improve at different rates to end up at Denver's ultimate goal.
- Why are we calculating 53 for mid-rise?
- *Get under the hood of calculations
 - Elizabeth wants spreadsheets on how calculations were done Chuck – need more detail
- All other category incorporates a lot of building types
- Agrees R buildings have big credit discrepancies
- In the 'all other occupancies' we're not giving electrification credit options for doing partial electric
- Katrina – it sounds like we should hear about other proposals first
 - Elizabeth – C406.5.1 - would we match this with Renewables?
- Can send data from Implementation Plan to broader group (including EM)
 - Email out so people can review at their leisure
 - Post publicly
- Elizabeth – clarify to committee if we are mandated to achieve these goals or if we're deciding on if goals can be met
 - Katrina – end of the day, committee is trying to strike that balance
 - How do we help committee inform discussion?
 - Elizabeth – Example of renewables – find a number that is achievable

b. Renewables

- Jonny – get to something attainable; what percent required;
 - Near term carbon benefit is substantial; In the long run electrification

is going to have most significant impact; onsite requirement is reflective of long term sustainable grid operations;

- What role to distributed renewables play ?
- Incentivize electrification
- Availability of off-site
 - Jonny – anticipate off-site renewables being available
- Elizabeth -
 - Mandatory solar requirement in Boulder; 5% energy offset and it's hard; did an analysis of 3 story MF building, to get 5% offset, they'll likely not be able to get under 100kw to get 5%
 - ** Kw/sf/year calculations do not align with 20% of annual energy use
 - Not a fan of mandating; prefer renewable energy goes into C406 and C407;
 - Unintended consequence of Boulder; Owners always compare building upgrade to what is solar offset?
 - *Does not believe 20% is right number
 - Elizabeth has been trying to use GBO off-site solar requirements and it's not available
- Antonio – how achievable is this and compare globally?
- Chuck – substantiation behind number
 - *Where did 20% come from? Just to meet goals?
 - Feasibility across building types? What is the cost of on-site vs offsite?
 - Off-site was an off-site asset

5. Detailed Notes of Discussions/Questions

- a. Other Topics/Discussions
- b. Next steps/upcoming meeting topics:
 - 5/31: Focus on refining proposals

Meeting adjourned