International Code Council (ICC) Committee Hearings
Group C – International Green Construction Code (IgCC)
April 27, 2014 – May 2, 2014

Summary of NRMCA and Stakeholder Testimony in Group C

Overview

The International Code Council (ICC) develops model construction and public safety codes adoptable by states and local jurisdictions through the governmental consensus process under a three-year cycle. Participation in the development of the codes, including code hearings, is open to all. The current code cycle (2014) addresses proposals for the International Green Construction Code (IgCC). The process includes a Committee Hearing where the committee is required to consider all views, objections and the cost impact of all code change proposals. The proponents can offer a change to the code at the Hearing and has the opportunity to rebut opponents and vice versa. Anyone who attends the hearing can testify.

This cycle saw a number of proposals affecting concrete interests including life cycle assessments (LCAs), pervious and permeable pavement, urban heat island (UHI) reduction, service life, environmental product declarations (EPDs), health product declarations (HPDs) and resilience. Unlike the US Green Building Council's LEED (Leadership in Energy and Environmental Design) green-building rating system, the IgCC is an enforceable code and can have dramatic implications to many industries if adopted.

Representation

Because of the mandatory nature of the IgCC, there were four wood industry, three iron and steel industry, two asphalt industry, four roofing industry, and most other construction material industries represented along with code officials of various states (e.g., WA state had four code officials there). Global Cool Cities Alliance (GCCA) had two representatives and were active on many proposals affecting urban heat island reduction. Representatives from the cement and concrete products industries included Steve Szoke, PE and Martha VanGeem, PE representing PCA; Emily Lorenz, PE representing PCI; Jason Thompson, PE represented the Masonry Alliance for Codes and Standards (MACS) interests and Tien Peng represented NRMCA.

While there were special interests from all industries and agencies, the focus of the IgCC Committee was how to make the IgCC more adoptable (simplier and cheaper) as they saw most states resisting adoption. RI, MD, FL (only optional state-wide) and only a dozen municipalities have adopted the IgCC.

Issues

1) Whole Building LCA:
Eliminate Operational Use Phase - It was clear that the only proponents for the elimination of the operational phase were the wood industry representatives. The committee disapproved based on overwhelming opposition. Unfortunately, Wayne Trusty, founder of Athena Institute, provided testimony on other LCA issues benefitting wood industry proposals. This included the reorganization of the Whole Building LCA into the Material Section (Section 5) along with the exclusion of the maintenance and plug loads from Whole Building LCA.

Concrete and steel interests joined together to add LCA impact categories – Land Use, Habitat Alteration, and Ecotoxicity which would create a more realistic picture of the environmental impacts of the wood industry. However, this was disapproved mostly because of the doubt opponents and Wayne Trusty put in front of the committee based on uncertainty of data and lack of metrics. Technically there is now a metric for Ecotoxicity (EPA's EcoTox Database) published in 2012 but it was unfamiliar to the committee and failed to pass. The new ASTM E2921 Standard for LCA was supported by many industries in addition to the ISO 14044 standard and approved for adoption.

2) Resilient Design LCA:
The Hearings were held on days where two headlines highlighting the destruction and deaths from the twisters in the recent storms and the mounting cost of the recovery efforts in NJ from Sandy. However, the NRMCA proposed Jurisdictional Elective on Resilient Design and Construction using the LCA methodology was disapproved 12/0. The opposition to the Resilient Design and Construction claimed a number issues with the proposal:

1. Risk Assessment doesn't belong in the Green Codes (did not understand (or hear) the link to sustainability)
2. Unclear metrics to what and how the losses are calculated (did not understand HAZUS)
3. LCA of multiple Hazards very complex to model (Wayne Trusty referencing his work with FEMA)
4. Why is "man-made" hazards also considered? How do you account for this risk?
5. Impact categories do not match the existing whole Building LCA requirements
6. Target reduction do not match the existing whole Building LCA requirements
7. Disaster Resilience should be determined by the community and not placed into the codes (Nancy McNabb of NIST (Manager, Bldg Fire Codes & Standards) did not realize this was a Jurisdictional Option proposal)
8. This is a single industry initiative with no stakeholder collaboration (only cement and concrete interests testified in support)

It's unfortunate the NIST (National Institute of Standards and Technology) chose not to support (in fact, oppose) the Resilient Design proposal as they have been (at least publicly) a proponent of resilience. The Committee was receptive using words like "admirable," "resilience definitely belongs in the green spectrum," "can't be in continuous denial about disasters effects," and "encourage to come back." NRMCA will attempt to get it back in for Final Action Hearings in September. A similar proposal to put the same language in the Appendix (same text) was not moved forward.

PCA's Resilient Construction proposal (a compendium of code changes overlaying the International Building Code) in the Appendix was similarly disapproved 12/0. Again, the proponents were only cement and concrete interest. The same industries and agencies opposed. The comments in opposition was:

1. Solution to problem not well defined.
2. Why proposal is heavily against Vinyl, Carpet, EIFS
3. Nothing connects proposal with fix
4. Buildings designed to older standards and codes are the ones in disasters

5. More stories, more environmental (this proposal less stories)
6. Fraught with errors
7. Resilience is a performance solution not prescriptive (yet they opposed the Resilience LCA)
8. Only structural, need solutions to reduce suffering after event (Response)

3) Urban Heat Island and Pervious Concrete - The asphalt industry had two proposals affecting UHI reduction in the code. One was using the ASU "Unintended Consequences" paper to place doubt on the efficacy of solar reflectance as a metric to reduce UHI. The other was to redefine pervious and permeable to just be void content instead of percolation rate. They were disapproved on both as virtually every industry opposed (include great testimony from Global Cool Cities' two staff) against their two proponents. The proponent is National Asphalt Pavement Association's (NAPA) Heather Dylla, PhD, their newly hired expert who has extensive research on both concrete and asphalt materials. She focuses on Sustainability while Howard Marks is now on environmental issues. Ms Dylla stands by the ASU paper believing it represents an exception to the rule that is common practice in considering Solar Reflectance (SR) as a tool for UHI reduction. The other proponent is – Stuart Kaplow, a real estate attorney who blogs on sustainability and green building.

4) Environmental Product Declarations (EPDs) – There was tremendous interest and support for a number of proposals to include EPDs in the IgCC. The committee approved only a few proposals that brought EPDs into the codes.

While the concrete industry is leading the way to the transparency movement, there was obvious confusion around the development and use of EPDs for code officials in evaluating a building for compliance.

5) Service life – There were a few proposals that supported mandatory design service life including one supporting an increase to 75 years. However, the committee did not approve and Building Service Life Planning is kept as an option.

6) Health Product Declarations (HPDs) - Interesting to note that Perkins+Will (a leading design firm issuing the mandate letter to have all products in their library with EPDs and HPDs) had a number of proposals introducing HPDs and was overwhemingly opposed and disapproved. The main hurdle from the Committee was what action was to be taken by code officials with HPDs.

Finally, the Target Corporation sent three representatives to the code hearings. This is signal of the importance these codes represent. While no other big box stores are represented, Target is aware that with close to 2,000 stores throughout the country, a mandatory green code change can have significant financial consequences to their market growth.

Summary of Committee Hearing Results

IgCC Code Change Proposal	NRMCA Recommendation	IgCC Committee Action
GG80- Move Whole Building LCA from Section 303 to 505	Disapprove	Disapprove
GG81- Remove Whole Building LCA	Disapprove	Disapprove
GG82- Remove Operational Energy, reference building, maintenance, and Reference ASTM E2921-13 for Whole Building LCA	Disapprove	Disapprove
GG83- Move whole Building LCA from Section 303 to 505	Disapprove	Approve
GG84-Replace Reference to ISO 14044 with ASTM E2921-13 for Whole Building LCA	Disapprove	Disapprove
GG85- Remove reference building, maintenance, and Reference ASTM E2921-13 for Whole Building LCA	Disapprove	Approve
GG86-Reference service life not less than 60 years	Approve	Approve
GG88-Redefining whole building LCA	Disapprove	Disapprove
GG89-Add Resource use and Land use to impact categories	Approve	Disapprove
GG90-Redefining whole building LCA tool	Disapprove	Disapprove
GG93-Redefining Reference building	Disapprove	Disapprove
GG95- Remove Whole Building LCA	Disapprove	Disapprove
GG97-Redefining whole building LCA	Disapprove	Disapprove
GG98-Add Ecotoxcicity to impact categories	Approve	Disapprove
GG156- Remove SR value in Site Hardscape materials, and remove pervious exceptions	Disapprove	Disapprove
GG157- Redefine pervious concrete Exception in Site Hardscape materials	Disapprove	Disapprove
GG159- Redefine pervious pavement to void content instead of percolation rate	Disapprove	Disapprove
GG160- Redefine pervious pavement	Disapprove	Disapprove
GG163- Expand Cool Roof climate zones	Approve	Disapprove
GG165- Expand Cool Roof climate zones	Approve	Disapprove
GG189- Resilient Design and Construction using LCA	Approve	Disapprove
GG192- EPD in lieu of Section 505.1 Material Selection	Disapprove	Disapprove
GG194- EPD option as percentage adjustment to Section 505.1 Material Selection	Approve	Approve
GG195- EPD option as compliance to Section 505.1 Material Selection with certified new wood section	Disapprove	Disapprove
GG196- Redefining Indigenous Materials	Disapprove	Disapprove
GG198- EPD option as compliance to Section 505.1 Material Selection with certified new wood section	Disapprove	Disapprove
GG202- Add EPD option as compliance to Section 505.2	Approve	Disapprove
GG224-Building Service Life Plan from elective to mandatory	Approve	Disapprove
GG258-Move Acoustic Performance to Appendix	Disapprove	Disapprove
GG320-Revise IGCC and remove whole building LCA	Disapprove	Disapprove
GG323-Revise Definition for Reference Service Life	Approve	Approve
GG338-Functional Resilience in Appendix	Approve	Disapprove
GG339-Resilient Design LCA in Appendix	Approve	Disapprove