

## **STATE FIRE PREVENTION AND BUILDING CODE COUNCIL TECHNICAL SUBCOMMITTEE MEETING**

Minutes of the initial meeting of the technical subcommittee reviewing the **2012 International Energy Conversation Construction Code** for adoption by New York State, held at the Albany office of the NYSERDA, 17 Columbia Circle, Albany, New York, on May 17, 2012.

### **APPEARANCES:**

Ian Carl Graham, member (In NYC Boardroom)  
Don Winston, member (In NYC Boardroom)  
Mark Swartz member (In NYC Boardroom)  
Scott Copp, member  
Michael DeWein, member  
Todd Stewart, member  
John Ferraro, member  
Dan Farrell, member  
Michael Burke, member  
Michael Burnetter, DOS  
Joseph Hill, DOS, Committee Chairman

### **MEETING MINUTES:**

Joseph Hill opened the meeting at approximately 10:00 A.M., all Subcommittee members were present in NYSERDA Boardrooms in Albany and in NYC (by teleconference link). The members were then asked to introduce themselves.

Joseph Hill discussed the methods required for “new” code sections in order to be adopted in New York State, starting from the IECC 2012 Model Energy Code, these being subject to provisions of Article 11, which requires a ten year simple payback study for modification of the current Energy Code. A quorum of members must be present to vote on approval/disapproval of particular measures; Mr. Hill and Michael Burnetter are non-voting members of the Energy Technical Subcommittee, the Chair voting only in cases of a tied committee vote. Also discussed were provisions of Article 18 of the Executive Law, the Building Code Act which empowers the Subcommittee to act on behalf of the NYS Codes Council, and also requires the Committee to observe the State Administrative Procedures Act process, including impact statements for each modifications/changes. The group then discussed the formation of the future meeting schedule for the Subcommittee. Members were alerted to be aware of any less restrictive provisions found in the IECC 2012 Model Energy Code (Provisions less restrictive than the current Energy Code). Mr. Hill relayed that the Code as altered needs to be at least as restrictive as the IECC 2009 as required by the American Recovery and Reinvestment Act (ARRA).

Mike DeWein (Subcommittee member) questioned that it may be appropriate to consider the code modifications as a whole (overall) to be weighted as more (or less) restrictive, rather than considering the measure of individual components of the code. Mr. Hill agreed that may well be the appropriate method. NYSDOS Code Development will be consulted on this matter.

Mr. Hill then outlined the IECC 2012 amended provisions for Residential construction and began discussion of the following items;

Table R402.1.1- Insulation and Fenestration Requirements by Component

Fenestration-	SHGC- 0.40 (CZ 4) U -0.32 (CZ 5&6)
Skylights-	0.55 (CZ 4,5,6)
Basement wall-	R-15/19 (CZ 5&6)
Wood framed wall-	R- 13+5 or 20 (Climate Design Zone 4) / R-20+5 (Climate Design Zone 6)
Ceiling-	R-49 (CZ 4)

Discussion on the above requirements yielded the following;

Todd Stewart (Committee member) and representative of the NYS Builders Association relayed that the increased requirements in Glazing and Basement wall requirements would not be a problem for the industry to meet, Committee members agreed with this assessment. Mr. Stewart stated the requirements in Climate Design Zone 6, for wood framed walls (which is R =20+5), requires an added layer of continuous insulation added to the wood framed wall at the exterior wall face (indicated by footnote). This requirement adds another level of expense for the building community, and he would oppose this additional requirement on that basis. The potential for limited availability of insulated sheathing products was also discussed, although it was also discussed that this may be a cyclical or temporary situation based on specific product type.

In terms of wall insulation increase in Climate Design Zone 4, according to Mark Schwarz (Committee member) many developers/builders are already installing this level of wall insulation, therefore, not a problem in Zone 4. Also discussed were requirements for ceiling insulation of R-49 ( all design zones in New York State). It was discussed that this R value is reduced to R-38 when the full depth of insulation is extended to the exterior wall line, and that it may further be reduced in the allowable Total UA alternative, which is a function of RESCheck. It was decided to table this discussion until transcripts of the IECC 2012 hearings can be requested.

### **R403.2 Ducts**

The Model Code, IECC2012, Section R403.2.3, does not allow building framing cavities to be utilized as either supply or return ducts or plenums. Duct testing is required when outside of building envelope with tighter standard of 4 cfm/100 sf floor area.

Discussion on the above requirements yielded the following;

Michael Burke and Todd Stewart (Subcommittee members) spoke in strong opposition to a change in the code language which disallows the use of framed building cavities as return ducts, since “panned ducts’ are a part of the residential building industry”. By changing this allowance, it becomes an obstacle for HVAC contractors, in their view.

Arguments on the other side, speaking in support of the change (Michael DeWein, Committee member) indicates that a number of factors spell out the need for elimination of panned ducts, some of which are;

The range of building cavities in which the supply ducts run can be room temperature, to outside temperature, which can (in cooling season) contain high humidity levels, from attic and basements. In the heating season, can introduce cold air into the furnace return, either would effectively drop the operating efficiency of the equipment. Panned ducts can pull contaminants from indoors and outdoors, depending on where the returns pass through (garages, attics, or outdoors), have the potential to cause mold growth in the building cavities. Evidence of this has been seen in case studies. More importantly, disallowing the use of panned building areas is essential to eliminate coupling of the building cavities to the HVAC system, and thereby of the breathing zone to the building enclosure.

Due to the importance of this change, votes *were not* taken on these items, pending the introduction of the International Codes Council monographs which will outline further arguments on both sides of this issue. The committee asked Michael Burnetter (committee member) to re-write the following section in this manner.

**R403.4** Service hot water plumbing – insulated to R-3 dependent on pipe size and run out line length.

The committee as a group discussed these requirements at length; a committee Vote was taken on the roughly revised section as shown below, all members agreed on the proposed revisions;

Retain 403.4.1 Circulating hot water systems. (Mandatory)

Change 403.4.2 Hot water pipe insulation (~~Prescriptive~~) (Mandatory)

**R403.4 Service hot water systems.**

Energy conservation measures for service hot water systems shall be in accordance with Sections R403.4.1 and R403.4.2.

**R403.4.1 Circulating hot water systems (Mandatory).**

Circulating hot water systems shall be provided with an automatic or readily *accessible* manual switch that can turn off the hot-water circulating pump when the system is not in use.

**R403.4.2 Hot water pipe insulation (Prescriptive Mandatory).**

Insulation for hot water pipe with a minimum thermal resistance (*R*-value) of R-3 shall be applied to the following:

- ~~1. Piping larger than  $\frac{3}{4}$  inch nominal diameter.~~
- ~~2. Piping serving more than one dwelling unit.~~
- ~~1. Piping from the water heater to kitchen outlets.~~
2. Piping located outside the conditioned space.
- ~~5. Piping from the water heater to a distribution manifold.~~
- ~~6. Piping located under a floor slab.~~
3. Buried piping.
- ~~8. Supply and return piping in recirculation systems other than demand recirculation systems.~~
4. All circulating service (potable) hot water piping.
- ~~9. Piping with run lengths greater than the maximum run lengths for the nominal pipe diameter given in Table R403.4.2.~~

All remaining piping shall be insulated to at least R-3 or meet the run-length requirements of Table R403.4.2.

**TABLE R403.4.2**  
**MAXIMUM RUN LENGTH (feet)<sup>a</sup>**

Nominal Pipe Diameter of Largest Diameter Pipe in the Run (inch)	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	$\geq \frac{3}{4}$
Maximum Run Length	30	20	10	5

Joseph Hill entertained a motion to adjourn. The meeting was adjourned at approximately 2:50 PM.