Building and Energy Codes: A Status Update

Michael Fischer, Kellen
Code Consultant to CPI

ANTITRUST POLICY STATEMENT FOR SPRAY POLYURETHANE FOAM ALLIANCE MEETINGS

- It is and shall remain the policy of the Spray Polyurethane Foam Alliance ("SPFA"), and it is the continuing responsibility of every SPFA member company, SPFA meeting or event participant, as well as SPFA staff and leadership to comply in all respects with federal and state antitrust laws. No activity or discussion at any SPFA meeting or other function may be engaged in for the purpose of bringing about any understanding or agreement among members to (1) raise, lower or stabilize prices; (2) regulate production; (3) allocate markets; (4) encourage boycotts; (5) foster unfair or deceptive trade practices; (6) assist in monopolization; or (7) in any way violate or give the appearance of violating federal or state antitrust laws.

- Any concerns or questions regarding the meaning or applicability of this policy, as well as any concerns regarding activities or discussions at SPFA meetings should be promptly brought to the attention of SPFA's Executive Director and/or its legal counsel.

Welcome to My World

- Product Performance Characteristics
- Issues
- Stakeholders
  - Influencers
  - Allies
  - Others
- Venues

Hearings… Stakeholders…

Responsible Advocacy…

Product Performance

- Thermal Resistance
- Air and Vapor Permeance
- Structural Effects
- Sound Transmission Resistance

Issues

- Energy Efficiency
  - R-Value
  - Air Barrier
- Building Performance
  - Moisture Management
- Wind Uplift
  - SPF Contribution
- Sustainable Building Design
  - Noise Reduction

Issues

- Moisture Management
  - Condensation
  - Unintended Water
- Fire Performance
  - Thermal Barrier
- Chemicals of Concern
  - Flame Retardant Chemicals

Stakeholders: Influencers

- Governmental Entities
  - National (DOE, EPA, etc.)
  - State and Local
- Research Groups
  - National Labs
  - University Projects
- Building Owners
  - BOMA, GSA
- Building Designers
  - AIA, NCSEA

Stakeholders: Influencers

- NGOs
  - USGBC (US Green Building Council)
  - Sierra Club
  - NRDC (National Resource Defense Council)
- Governmental Representatives
  - ICC Code Official Chapters
  - State Councils

Stakeholders: Allies

- American Chemistry Council
  - SFC, FSC
- Foam Plastics Groups
  - PIMA, XPSA, EIA, EPSMA
- Energy Efficiency Groups
  - EECC (Energy Efficient Codes Coalition)
  - EEFC (Energy Efficient Foam Coalition)
  - ASE (Alliance to Save Energy)
  - ACEEE (American Council for an Energy Efficient Economy)
  - Regional Energy Efficiency Groups

Stakeholders: Others

- Competing Industry Trade Groups
  - NAIMA
- Environmental Groups
  - Issue Dependent
- Research Entities
- Builders
  - NAHB
  - LBA (Leading Builders of America)

Venues

- Model Codes Developers
  - ICC
  - ASHRAE
  - NAHB
- Product Standards Developers
  - ASTM
  - NFPA

Venues

- State Code Adoption Processes
  - Florida Building Commission
  - California Title 24
- State Rulemaking
  - California AB 127
- Federal Rulemaking
  - EPA

What's On Our Plate?

- Florida Building Commission
  - 2017 Florida Building Code Updates
  - Florida-Specific Modifications
  - SPF Research: Year Two
- (ICC) International Code Council
  - Group "B": IECC, IRC, IFC
  - Issues Include Energy Efficiency and Possibly Flame Retardants

Florida Building Commission

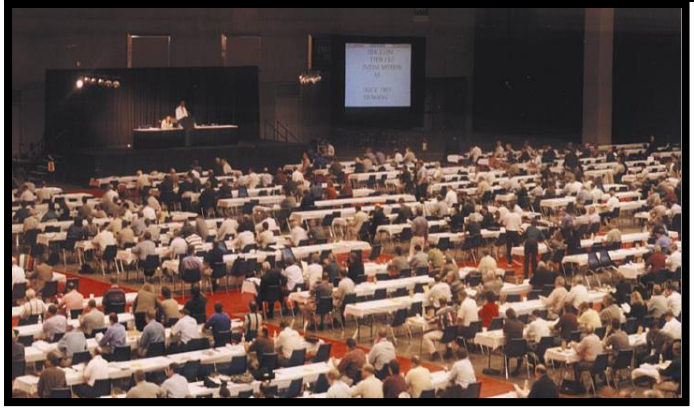
- 2017 Florida Building Codes
  - Updates from the 2015 I-Codes
  - Energy Code Debate Will Include ERI
- SPF Research Project
  - Investigating Moisture Issues Arising from SPF and Effect on Wood Decks
  - Phase II Underway By ORNL and UF

SPRAYFOAM 2016
CONVENTION AND EXPO
FEBRUARY 8-11
SPFA
FOAM•IT•RIGHT
PCP
ORLANDO, FLORIDA

2016 COMMITTEE ACTION HEARINGS

GROUP B CODES LOUISVILLE

ICC
INTERNATIONAL CODE COUNCIL®



2018 I-Code Development

- Group A Completed
  - IBC, IMC
- Group B Underway
  - IECC, IRC, IFC
  - Code Development Hearings (CDH) Will be Held in Louisville in Late April
  - Proposals Were Submitted in January
  - Public Comment period This Summer
  - Public Comment Hearings (PCH) in Kansas City This October

IECC Table R402.1.2

Climate Zone	Ceiling R-Value	Wood-Frame Wall R-Value: Cavity Insulation Only	Wood-Frame Wall R-Value: Combination Cavity and Continuous Insulation (ci)	Wood-Frame Wall R-Value: Continuous Insulation (ci) Only	~~Wood Frame Wall R Value~~
1	30	13	-	9ci	~~13~~
2	38	13	-	9ci	~~13~~
3	38	20	13 + 5ci[h]	14ci	~~20 or 13+5~~
4 Except Marine	49	20	13 + 5ci[h]	14ci	~~20 or 13+5~~
5 and Marine 4	49	20	13 + 5ci[h]	14ci	~~20 or 13+5~~
6	49	30[k]	20+ 5ci[h] or 13 + 10ci[h]	19ci	~~20+5 or 13+10~~
7 and 8	49	30[k]	20+ 5ci[h] or 13 + 10ci[h]	19ci	~~20+5 or 13+10~~

[k]requires 2 x 8 wall

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1	30	13	-	9ci
2	38	13	-	9ci
3	38	20	13 + 5ci[h]	14ci
4 Except Marine	49	20	13 + 5ci[h]	14ci
5 and Marine 4	49	20	13 + 5ci[h]	14ci
6	49	30[k]	20+ 5ci[h] or 13 + 10ci[h]	19ci
7 and 8	49	30[k]	20+ 5ci[h] or 13 + 10ci[h]	19ci

[k]requires 2 x 8 wall

IECC Ceiling Joist Insulation

R402.2.2

Proponent : Mike Fischer, Kellen, representing The Center for the Polyurethanes Industry of the American Chemistry Council (mfischer@kellencompany.com)

2015 International Energy Conservation Code

Revise as follows:

R402.2.2 Ceilings without attic spaces. Where Section R402.1.2 would require R-38 or R-49 insulation ~~levels above R-30~~ in the ceiling and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation for such roof/ceiling assemblies shall be R-30. The full height of uncompressed R-30 insulation shall extend over the wall top plate at the eaves. This reduction of insulation from the requirements of Section R402.1.2 shall be limited to 500 square feet (46 m^2) or 20 percent of the total insulated ceiling area, whichever is less. This reduction shall not apply to the *U*-factor alternative approach in Section R402.1.4 and the total UA alternative in Section R402.1.5.

Reason: The proposed language relates to the current provision in the IECC-R that allows for some limited lower R-Values where the roof/ceiling design provides limited space. This might typically apply where a room addition or a sun room with a single slope roof constructed with simple dimensional lumber framing instead of trusses. The proposal is largely editorial in that it does not change the insulation requirements, but reorganizes the text in R402.2.2 to match the format and style used on R402.2.1.

The proposal makes one clarification that in order to use this option the insulation must extend over the wall top plate to avoid a thermal short circuit.

Other ICC Proposals

- NAIMA: Air-Permeable Insulation Provisions for Unvented Attics
- Foam Sheathing Committee
  - Air Barrier Requirements
  - Vapor Retarder Requirements
  - Continuous vs. Cavity
- Energy Efficient Codes Coalition
  - Energy Rating Index

Energy Rating Index (ERI)

- Included in 2015 IECC
- Permits Insulation to be Traded Off for Renewable Energy Sources Including Rooftop Solar PV
- Will be a Critical Debate at the IECC Committee Hearings
- The Fact That the Energy Source is Renewable Doesn't Mean We Should Waste It….
- Solar Subsidies Are Intended to Save Energy NOT to Deselect Insulation

ERI Continued….

- RESNET Standards Discussion in April Meetings (Scottsdale, AZ)
- AHRAE 90.2 Performance Code for Residential Buildings
- CA Title 24 Allows PV Tradeoff for High Performance Insulation Systems in Walls and Attics
- State Adoption Strategy
- Insulation Industry Coalition Formed

Summary….

- Responsible Advocacy
  - Issues Management: Multiple Fronts
  - Sound Technical Arguments
- Coordinated Efforts
  - Allies and Coalitions
  - Product Neutral Positioning
  - Performance-Based Regulation

Summary….

- Air Barrier *Performance*
- Thermal *Performance*
- Structural and Sound *Performance*
- Energy Efficiency *Performance*
- Level Playing Field
- Disproving Negatives:
  - Not Always About “The Truth”

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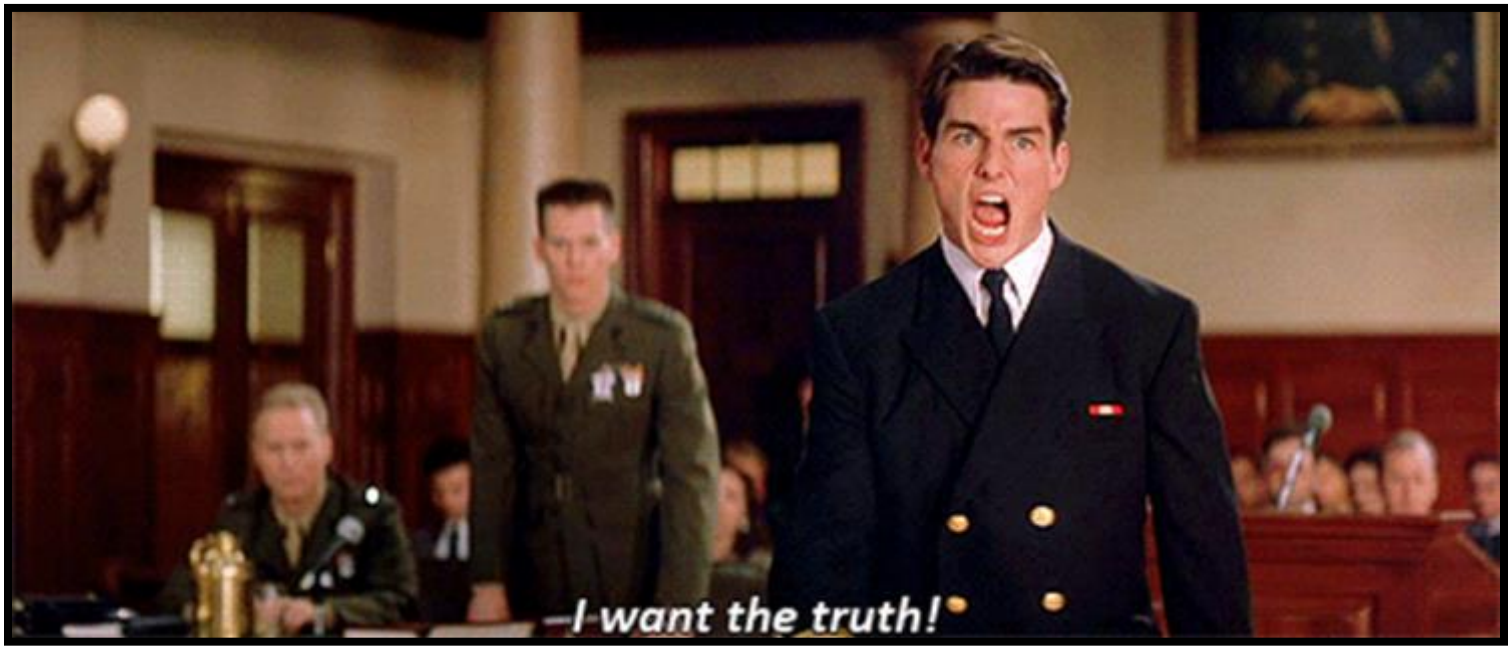

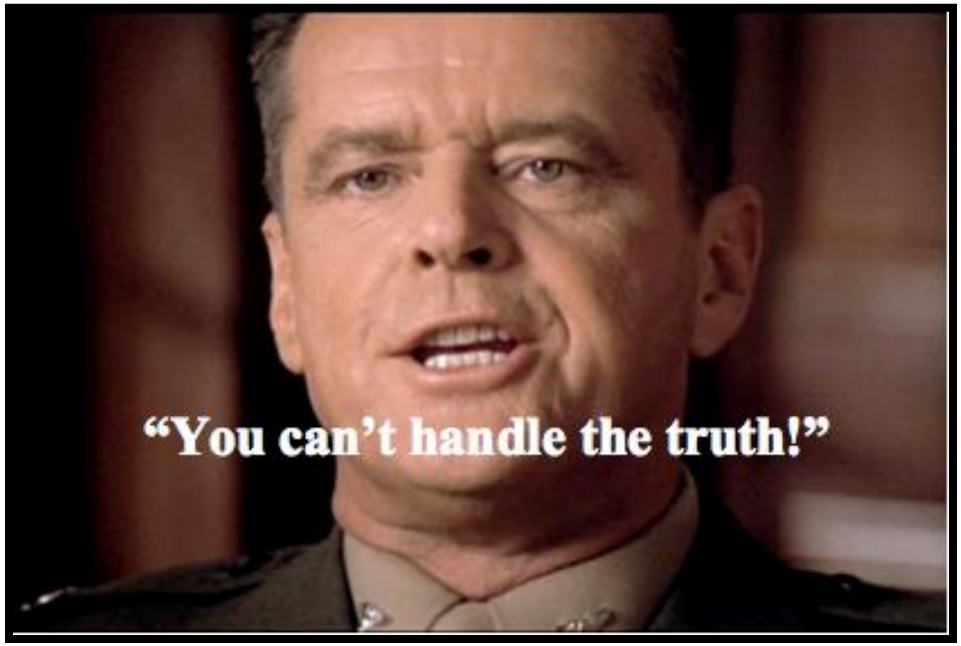

Questions? Thanks!

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