

Fire Protection/Safety Engineers Roundtable Discussion – Summary of Key Points

Participants

- Brian Meacham (BM), Moderator
- Armin Wolski (AW), Reax Engineering, FPE 25 years, MS thesis on risk and PB code, PBD for fire
- Karl Wallasch (KW), Trigon Fire, CEng., working SFPE PBD standard committee & German and British entities on PBD guidance
- Michael Stromgren (MS), Briab, Sweden, FSE with background at national body for building regulation in Sweden, regulatory background and FSE background
- Dave Stacy (DS), PB Fire Protection Engineering, FPE 11 years, focus on PB fire design
- Eric Mayl (EM), FPE, former firefighter, involved in PBD for several years
- Mark Hopkins (MH), Terp Consulting, FPE, 30 years, on SFPE PB design standard committee
- Craig Hofmeister (CH), The Fire Consultants, FPE, 30 years, much on PB realm
- Dan Nichols (DN), MTA NY and CT, FPE, infrastructure / building interfaces, need PBD, not always fit well with prescriptive code approach, lack controls for readily accepting PBDs
- Carl Baldassarra (CB), WJE, FPE, 45 years, codes & standards development and design focus
- Chris Jelenewicz (CJ), SFPE, chief engineer at SFPE, staff liaison to PB standard and others
- Alex Bwalya (AB), NRC Canada, ME background, fire research, building fire dynamics, NRC doing research on performance code as well

Key Take-aways

- In England, which has had a PB regulatory system for 20 years, PBD is a legal option from the start, not as equivalency. This has created a lot of opportunities. However, has taken time to get actors up to speed, and still gaps. Educational preparation is lacking in some areas.
- Similar in USA, where some have been doing PBD for 20 years, but challenges with getting approvals, and peer review is a common approach. Lot of variability in approval. Need education and training, especially for code officials that may not have engineering backgrounds.
- We are caught up in a prescriptive environment, built in reaction to events, but for which now holistic performance is not readily known. Difficult to assess equivalencies to unknown performance levels. Without clearly defined goals of the current (prescriptive) code, it is hard to talk about performance. Would be helpful to move to performance, which can be informed by trying to extract performance objectives from IBC, similar to how Canada proceeded for 2005.
- Idea of 'acceptable' (tolerable) risk as a basis for performance has some attractiveness. Current challenge is that focus is often on 1-2 items and not overall building performance. This makes it difficult in coordinating with other disciplines as well.
- Some desire to move towards more probabilistic methods, but difficult to gain agreement based on current practice.
- Near-term approach seems to be continuing to focus largely on defining the process, giving guidance on scenarios, quantifying fires, and quantifying criteria, leaving decision to engineer.
- For future code, more scenarios and guidance helpful, and clearer objectives based on 'acceptable risk' or other holistic basis, to the extent possible, could help. Variability in solutions OK, as long as all end up meeting defined risk/safety/performance objectives.
- Need to find a way to develop confidence in system even when there will be variation.