

## MEP / Energy Roundtable Discussion – Summary of Key Points

### Participants

- Brian Meacham, Moderator
- Chris Baker (CB), Willdan, energy efficiency programs, performance- and outcomes-based
- Kim Cheslak (KC), New Building Institute, energy code focus
- Michael Rosenberg (MR), PNNL, transition to energy performance codes
- Amy Boyce (AB), Institute for Market Transformation, building performance standards
- Kyle Thompson (KT), Plumbing Manufacturers International, codes and standards development
- Dan Nichols (DN), Metropolitan Transit Authority / MNR, performance-based approaches
- Mark Frankel (MF), Ecotope Inc., mechanical and plumbing, outcome-based codes
- Rick Sullivan (RS), Department of State, looking to adopt more performance approaches
- Jim Kendzel (JK), American Supply Association, product standards and model code development, one standard one test aim, not sure how that works with performance
- Philip Fairey (PF), FSEC Energy Research Center, development of performance standards
- Russell Thomason (RT), Department of State, federal unified criteria code
- Roy Wilson (RW), Department of State, electrical design engineering, updating standards

### Key Take-aways

- Need to develop set of definitions – performance-based, outcome-based, outcome-based performance standard, ...
- Need to be clear if performance expectation is for compliance, in-use, or both – operational performance is much different than compliance with prescribed parameters
- Support of outcome-based performance codes which set performance targets to be achieved at design and in use
- Challenges with prescriptive approach are that
  - Performance not defined, so what is benchmark for alternative design?
  - Performance is not uniform – different MEP system types, different building construction, no consistency in performance
  - To use prescriptive code as deemed-to-satisfy, would need to narrow code
- Challenges for performance approach are that
  - Many enforcement officials do not have capacity or resources to assess model outcomes
  - Models currently benchmarked to specific prescriptive requirements to show compliance, and are not really performance assessment / prediction tools – can modify tools, but that comes with ability to clearly define parameters and targets
  - Not clear what performance requirements and criteria might be for some areas, such as electrical and some aspects of plumbing
  - Some areas, such as indoor air quality, might fit well in outcome-based performance code approach (maybe some plumbing too)
- Some states and jurisdiction have implemented laws that supersede the codes – Washington state, Boulder, CO, for example – if codes do not move to performance, could become less relevant
- Training, education, resources are key