

ASHRAE 2024/25 Center of Excellence for Decarbonization (CEBD)
Global Advisory Panel (GAP)
Meeting Summary
February 10th, 2025

Overview

- Kent Peterson provided welcome to attendees, opened the meeting, and gave a brief overview of CEBD activities completed since TFBD transition – 26 attendees, including 6 CEBD members (not including 2 ASHRAE staff members).
- Discussed key projects including guides published and upcoming release dates as well as new training and certifications.
- Clay introduced discussion topics for the meeting: 1) ASHRAE member satisfaction survey with building decarbonization training and education needs prioritization; and 2) an update on the flexible international building codes project discussed during 2023 GAP meeting.
- ASHRAE member survey results: 25% of respondents were outside of North America. International priority topics include active efficiency measures, facility management, passive efficiency measures, and decarbonization project development practices. 65% of international participants felt that climate change and building decarbonization were critical industry issues, compared to only 45% for non-international members.
- Discussion of younger membership responses and member needs, including a preferred learning delivery method of short 15-25 min videos.

Representatives shared thoughts on regional needs

- India: Mention of needs for benchmark metrics - for construction products (steel, concrete, etc.) and to engage government and large industry players. These are continuing/emerging topics and there is an expansion of interest in embodied carbon.
- Australia: Feel that embodied carbon is an area they are more advanced in (since 2010). Approach has been from government top down, industry from the middle, and owner/tenants from the bottom up. Also, this region has collected good measurement data.
- Denmark: Have had a setback in building decarbonization. Investment into energy islands has become more expensive than planned and has slowed development.
- Europe: Energy directives introduced in March last year had strict deadlines for carbon-free new construction. The key challenge for zero emissions buildings is assuring the electric grid keeps up with demand and costs.

Decarb Training and Education Topic Prioritization exercise (25 participants)

- Top 10 topic priorities in order of importance (top ten votes):
 - IAQ Management (17)
 - Building Management and Control Systems (15)

- Emission Reduction Roadmaps (15)
- Low GWP Refrigerants (14)
- Energy Storage Systems (14)
- Building Lifecycle Emissions Assessment (13)
- High-Performance HVAC Equipment (13)
- Building Retro-commissioning (12)
- Demand Flexibility (11)
- Building Thermal Envelope (11)

Discussion of ASHRAE collaboration with IEA, ICC and World Bank to develop the Flexible International Code Framework.

- How the framework is developed: Beginning with Needs (why have a code); then prioritize topics; next define code elements needed and application (targets); initiate code development (compliance/enforcement/maintenance); ensure there is stakeholder input (35 identified).
- Indonesia, Brazil, India are initial targets.
- Key input - Don't develop a code **for** global south countries, develop a code **with** global south countries.
- GAP meeting participant organizations are encouraged to collaborate in the project including review of framework content and participation in workshops.

GAP Comments:

- It is difficult to judge what to do from country to country (what works in Europe may not work in India), especially depending on technology, materials availability, performance standards, etc.
- Question about inclusion of Embodied Carbon – it is part of the topics discussed, but inclusion is dependent on the stakeholder feedback. The target is countries that have no or minimal codes – thus the “flexible” project title.
- Reduce the electrical demand by using equipment less and optimizing operation.
- Share country successes/failures as we journey towards net-zero Whole Life Carbon (WLC) emissions.
- Simplify everything: the codes, the standards, etc.
- Refrigerant management systems, with recovery and reuse.
- Regulation and restrictions provide a chance for innovation.
- Engage: Educate on the basics of good Operations and Management (O&M).
- Come together to focus on how to reduce and eliminate waste – energy, water, materials.
- To achieve decarbonization of buildings have common performance-based carbon assessment methods available with connected material/product databases based on global (ISO) standards.
- Organizations should collaborate more by working together on projects and activities. Share ongoing activities by organization and county using an online platform or shared spreadsheets.

- Organizations should have common goals such as sharing knowledge, international collaboration and prioritizing integrated design.
- Decide on PFAS (i.e., is this a long-term, potential problem or not) so that refrigerants containing “forever” chemicals can be removed from all research and development efforts and avoid another changeover of refrigerant and their systems for the entire world.
- Focus on lowest cost/shortest payback opportunities first and decarbonize existing buildings in stages as equipment reaches end-of-life.
- Good idea for how we can work together to improve decarbonization? Integrity, open and honest debate/discussions and global citizenship/ownership.
- Collaboration across industry segments (engineers, architects, interior designers, electrical, builder/contractors/IAQ professionals, scientists) across all project stages.
- One thing that will reduce the production of CO₂ in the atmosphere is a reduction in electrical consumption by using less (maybe a disconnect).
- Participation from impacted countries (global south).
- Global roadmap that is ambitious but reasonable and actionable.
- Focus on Developing countries that don’t have building regulations.
- Learn from countries who already have performance-based energy codes.