

## **GSA Green Building Advisory Committee (GBAC) Meeting**

**Thursday, November 2, 2023**

### **Attendees**

#### ***GBAC Members***

- Ralph DiNola, New Buildings Institute (NBI), Committee Chair
- Fernando Arias, RETech Advisors, Acting Committee Co-Chair
- Nicolas Baker, Council on Environmental Quality (CEQ)
- Kevin Bates, Sharp Development
- Brett Bridgeland, Rocky Mountain Institute (RMI)
- Roger Chang, Buro Happold
- Projjal Dutta, New York State Metropolitan Transportation Authority
- Whitney Gray, International WELL Building Institute
- Brent Kurapatskie, DOT
- Joyce Lee, IndigoJLD Green + Health
- Dom Lempereur, BlocPower
- Clay Nesler, The Nesler Group
- John Park, VA
- Kishia Powell, WSSC Water
- Keiva Rodriques, Maryland Aviation Administration
- Jane Rohde, JSR Associates
- Costas Samaras, Office of Science & Technology Policy
- Mary Sotos, DOE FEMP
- Timothy Unruh, National Association of Energy Service Companies (NAESCO)
- Conan Wilson, U.S. Environmental Protection Agency

#### ***GSA Participants***

Active participants included:

- Kevin Kampschroer, Chief Sustainability Officer and Federal Director, Office of Federal High-Performance Green Buildings (OFHPGB)
- Michael Bloom, Ken Sandler and Bryan Steverson, OFHPGB
- Lance Davis, Alexandra Kosmides, Ken Schelbert, Public Buildings Service (PBS)

Additional GSA staff from OFHPGB, PBS and the Office of Government-wide Policy attended as observers.

### ***Other Participants***

Additional observers attended from organizations including the US Departments of Energy, Defense and Justice, the Council on Environmental Quality, Environmental Protection Agency, Bureau of Reclamation, US Green Building Council, International WELL Building Institute, IAPMO, Verdacity, RETech Advisors and LATICRETE Intl.

### **Welcome and Introductions**

*Michael Bloom, GSA, OFHPGB, Designated Federal Officer*

*Ralph DiNola, NBI, Committee Chair*

Michael Bloom welcomed attendees and reviewed the statutory and historical context for the Committee. Ralph DiNola reminded members that the goals of this meeting are to reach consensus on Committee recommendations based on the draft work of its Task Groups on Green Leasing and Federal Building Decarbonization, as well as to brainstorm on the next set of topics for the GBAC to pursue. Committee members introduced themselves and shared brief ideas of what the group should pursue next (a number of these topics are discussed in the “New Committee Topics: Discussion” section below).

### **Federal Building Decarbonization: Proposed Advice Letter**

*Roger Chang, Buro Happold, Task Group Co-Chair*

The purpose of the GBAC Federal Building Decarbonization Task Group, in its third phase, is to explore opportunities and challenges for electrification of the federal building portfolio while aligning with national climate goals, action plans, and legislation.

The Advice Letter recommended that GSA develop a Strategic Electrification Approach, using the following protocol:

- **Review:** Develop a portfolio approach to conducting electrification audits, a database of building characteristics, and a streamlined guidance for utilization of tax deductions and credits. Document current and future projected grid emissions factors, linked with GSA carbon-free electricity (CFE) purchases.
- **Reduce:** Emphasize demand reduction measures within P100 and technologies rapidly deployable in existing/historic buildings within GSA’s Green Proving Ground (GPG).
- **Reconfigure and Recover:** Emphasize use of lower temperature hot water systems linked to heat pump systems within P100 and acknowledge the evolving

technology market. Develop targeted electrification phasing guidance by project type and a strategy for replacement of fossil fuel equipment.

- **Store:** Study the impact of small scale battery/thermal storage on emissions reductions within GPG.
- **Replace:** Develop outcome-based metrics based on greenhouse gas emissions intensity and pre-develop factors for teams to use in life cycle cost analysis for electrified systems (O&M focus) within P100. Utilize blanket purchase agreements to address the purchase of electrified technology (e.g., heat pumps) for smaller buildings.
- **Resources:** Invest in high quality training with focus on building operators, design managers, and budget developers. Engage with consortia working on harmonizing decarbonization initiatives.

For next steps, the Group recommended that GSA further align electrification roadmap development with the White House and DOE net zero emissions building definition, once announced in January 2024. GSA is also encouraged to utilize GSA's P100 working group to modify the next edition of the P100 to incorporate guidance from this Advice Letter, as well as its supporting Appendices. The Task Group also recommends that GSA continue to partner with industry groups focused on operational decarbonization work.

In the follow-up discussion, Committee members stressed the importance of continuously reviewing and assessing technologies as they emerge and addressing equipment replacement in ESPCs to account for electrification as well as efficiency improvements.

A critical topic of discussion was how to incorporate health and wellness in decarbonization planning. Supply chain concerns will need to be addressed as electrification, decarbonization, and deep energy retrofits become more challenging in a strict payback model. In regard to the development grid, reducing demand should be the primary focus and then electrification should be addressed.

### **Motion**

Per a motion for the Committee to accept the Task Group's Advice Letter, it was accepted with comment, meaning that Committee members will have two weeks to provide additional comments to the documents. The vote was unanimous among all 20 voting GBAC members, with 4 abstentions.

### **Green Leasing: Proposed Advice Letter**

*Kevin Bates, Sharp Development, Task Group Co-Chair*

*Fernando Arias, Re Tech Advisors, Task Group Co-Chair*

The purpose of this Task Group is to address the challenge of a significant deficiency of net zero greenhouse gas emissions (NZE) buildings available in the private sector for federal agency leases. To meet the mandate of Executive Order 14057, federal buildings of at least 25,000 rentable square feet (RSF), where the government leases at least 75% of the total building square footage, must lease NZE buildings by September 30, 2030.

The current supply of zero net energy/emissions buildings in the U.S. is 23MM sq. ft., while the current estimated demand is 490MM sq. ft., based on corporate and GSA demand combined. The challenge in meeting EO 14057 is to persuade private sector building owners to renovate existing building stock to NZE (or build new) to enable GSA to lease the properties required.

The Task Group identified the drivers of the perceived resistance from the private sector ownership as: low return on investment, limited availability of capital, lack of resources, and split incentives.

The Advice Letter included recommendations for GSA to:

- Communicate the potential financial benefits of renovating existing buildings to NZE.
- Educate private sector owners on alternative ways to procure capital.
- Align GSA lease terms appropriately to enable owners to amortize the cost of NZE improvements.
- Provide flexibility around the timing for completing NZE improvements when warranted.
- When utilizing a Net of Utilities lease form, the GSA should enable the landlord to increase the base rent by an amount commensurate with the energy savings generated by the NZE improvements and include these operating costs with the base rent when evaluating market rent compliance.
- Build on existing, commonly used, and accepted green building standards to create a flexible third-party verification system that conforms to the GSA's definition of NZE.
- Utilize various methods to communicate the above recommendations to the private sector.

In the follow-up discussion, Committee members expressed the need to better track net zero building performance outcomes related to health and wellness. It was also suggested that the source of capital and the incentives for decarbonization be emphasized as they make decarbonization efforts more of an opportunity. NZE should

be more clearly defined to align with the White House and DOE definition of NZE, as well as reference to third party standards and rating systems that align with the emerging definition.

### **Motion**

Per a motion for the Committee to accept the Task Group's Advice Letter, it was accepted with comment, meaning that Committee members will have two weeks to provide additional comments to the documents. The vote was unanimous among all 20 voting GBAC members, with 4 abstentions.

### **New Committee Topics: Discussion**

The Committee discussed several potential new topics that the GBAC could pursue. This provisional list has been grouped by theme but has not yet been completed or prioritized. It includes:

- Embodied Carbon
  - How to scale decarbonization and electrification
  - Low Embodied Carbon (LEC) Protocols
  - EPDs
  - Carbon labeling of materials
  - Buy Clean Act in the Inflation Reduction Act era
  
- Refrigerants
  - Compare the lifecycle emissions of different combinations of refrigerants (natural, ultra-low GWP, low GWP) at different levels of energy efficiency. This analysis should consider different grid emission factors, both at time of installation and over time (Cambium estimates).
  - It would be good to do an analysis for applied equipment and unitary (packaged) equipment
  
- Compare the life cycle emissions of early replacement (which incurs an immediate increase in embodied carbon) with replacement at end-of -life.
  - Service life of materials and equipment
  
- Occupant Health and Wellbeing
  - Reimagining ESPCs to include health
  
- Performance
  - Performance contracting
  - Performance tracking

The Committee also discussed potential process changes including:

- Diversify modes of gathering and providing advice
- Distinguish technical expert processes from community communication forums
- Diversify the demographic balance of GBAC – e.g., on gender representation

Committee members are to vote during the **December 7th** meeting on their highest priority topics for the next year.

### **Next Steps and Closing Comments**

Michael Bloom thanked Committee members for their hard work on both Advice Letters and reminded members that comments for both the Green Leasing and Federal Building Decarbonization Task Groups are due back EOD Friday, **November 17th**.