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**Green Building Advisory Committee
Wednesday, November 9, 2022 Meeting
Meeting Notes**

Committee Members

Fernando Arias	Clark Construction Group
Nic Baker	Council on Environmental Quality
Donnel Baird	BlocPower
Kevin Bates	Sharp Development Company
Gopinath Boray	Department of Health and Human Services
Ralph DiNola	New Buildings Institute
Whitney Gray	International WELL Building Institute
Clay Nesler	The Nesler Group
John Park	Department of Veterans Affairs
Andrew Persily	National Institute of Standards and Technology
Kishia Powell	WSSC Water
Jane Rohde	JSR Associates
Costa Samaras	Office of Science and Technology Policy
Scott Whiteford	Department of Energy
Conan Wilson	Environmental Protection Agency

GSA Participants

Ken Sandler	OFHPGB (Designated Federal Officer)
Kevin Kampschroer	OFHPGB (Director and Chief Sustainability Officer)
Jetta Wong	Climate Advisor to the Administrator
Krystal Brumfield	Associate Administrator, OGP

***Public Buildings Service
(PBS)***

Thomas Burke
Emily Conner
Kathleen Cruise
Ashish Desai
Susannah Gilmore
Alexandra Kosmides

Kyle McGlade
Jim Nobil
Ken Schelbert

Office of Federal High-Performance Green Buildings (OFHPGB)

Michael Bloom
Patrick Dale
Don Horn
Kinga Hydras
Sandrine Schultz
Bryan Steverson

Sabine Dramou Contractor
Alex Rogers Contractor

Other Offices

Boris Arratia OGP

Updates & Introductions

Kevin Kampschroer, GSA Chief Sustainability Officer
Krystal Brumfield, GSA Associate Administrator, Office of Government-wide Policy
Ken Sandler, GBAC Designated Federal Officer

Kevin Kampschroer thanked everyone for being here and gave tribute to several longstanding members who recently ended their terms on the Committee, singling out Kent Peterson, who recently served as Co-Chair of the Federal Building Decarbonization Task Group.

Kevin introduced Associate Administrator Krystal Brumfield, thanking her for her strong support of the Office of Federal High-Performance Green Buildings (OFHPGB). Krystal noted her pleasure to greet familiar faces and welcome new members of our committee, including:

Mr. Donnell Baird, CEO of BlocPower, a new representative from the environmental justice and decarbonization sectors. He has a remarkable background focusing on electrifying buildings and helping financially underserved communities across the country make their buildings healthier and more efficient.

Ms. Kishia Powell, General Manager and Chief Executive Officer of WSSC Water, a global water leader with over 20 years' experience on sustainable

infrastructure management, including serving as the current president of the National Association of Clean Water Agencies.

Nic Baker, Senior Sustainability Officer at the White House Council on Environmental Quality (CEQ), the new committee representative from CEQ, who managed a range of energy and sustainability programs at DOE's Federal Energy Management Program (FEMP) before moving to CEQ.

Conan Wilson, Chief of EPA's Sustainable and Transportation Solutions Branch, whose responsibilities include spurring and managing progress at EPA facilities on energy, water, fleet, commissioning, and climate resilience.

Ken Sandler welcomed the Committee as its Designated Federal Officer, noting that this is a working meeting focused on providing committee members with the opportunity to provide input and come to consensus on recommendations for GSA and Federal agencies to bring the federal building stock to sustainability.

Committee members introduced themselves and shared ideas for the group to pursue next. These topics are discussed in more detail below (see *Next Committee Topics & Directions* section).

Federal Updates: Executive Order 14057; Inflation Reduction Act and Other GSA Priorities; Green Leasing

Nic Baker, Senior Sustainability Officer, CEQ

Smita Gupta, Director for Federal Facility Decarbonization, CEQ

Jetta Wong, Senior Advisor on Climate to the GSA Administrator

Ken Schelbert and Alexandra Kosmides, GSA PBS, Office of Leasing

Executive Order 14057

Smita Gupta, with help from Cara Carmichael and Nic Baker, discussed the White House's detailed guidance on EO 14057, including in the [Federal Sustainability Plan](#) and [EO Implementing Instructions](#).

Key building-related goals of the EO include:

- 100% Carbon Pollution-Free Electricity (CFE) by 2030, including 50% on a 24/7 basis
- 100% Zero-Emission Vehicle Acquisitions by 2035, including 100% light-duty acquisitions by 2027
- Net-Zero Emissions Buildings by 2045, including a 50% reduction by 2032
- Net-Zero Emissions Procurement by 2050
- Net-Zero Emissions Operations by 2050, including a 65% reduction by 2030
- Climate Resilient Infrastructure and Operations
- Develop a Climate- and Sustainability-Focused Workforce
- Advance Environmental Justice and Equity-Focused Operations

- Accelerate Progress through Domestic and International Partnerships

More detailed forms of guidance and programs to implement EO 14057 include:

- DOD and GSA are working on a request for proposal (RFP) for CFE strategic planning, agency engagement, and training.
- The [Climate Smart Buildings Initiative](#) sets goals to catalyze over \$8 billion of private sector investment by 2030 to modernize facilities through energy savings performance contracts.
- The next key component is the [Federal Building Performance Standard](#).
- The [Federal Buy Clean Initiative](#) is advancing federal purchasing of low embodied carbon products.
- The Climate Adaptation Progress Report, which shows the dedication and commitment by agencies and their climate adaptation results, is under development and will be ready for release soon.

Other related areas of focus for CEQ are environmental justice and equity and workforce partnerships. CEQ is also working with GSA to clarify best approaches for federal agencies to report Scope 3 GHG emissions.

Agencies outline how they will meet all of these goals in their sustainability and strategic plans and as part of agency budget and operations mission planning. CEQ's intent for FY2023 is to help agencies understand and baseline their current portfolio set targets for 2030, and initiate short and long term planning.

CEQ will set up meetings with individual agencies to go through their planning processes. Every agency is going to have different pathways for decarbonization. Each will need to identify its mission-driven needs, other drivers and barriers, and define their strategies with consideration of all of these factors. CEQ will work to ensure that agencies properly understand sustainability as a value-add or improvement, not a hurdle or additionality.

Inflation Reduction Act and Other GSA Priorities

Kevin Kampschroer introduced Jetta Wong, the Senior Advisor on Climate to GSA's Administrator. She previously worked at DOE as the first Director of the Office of Technology Transition, where she was instrumental in moving clean energy technologies to market

Jetta noted that in her leadership conversations, sustainability cuts across all of GSA's priority areas. As a customer-oriented agency, GSA is very interested in industry engagement to help us understand what is going on in the marketplace. This Committee provides essential links and intelligence toward that end.

Given the availability of funding due to the Inflation Reduction Act (IRA), GSA now can fund sustainable projects and initiatives. The IRA funds three pockets of work:

- \$2.15 billion is available for low embodied carbon standards and projects. The Advisory Committee's [Advice Letter: Policy Recommendations for Procurement of Low Embodied Energy and Carbon Materials by Federal Agencies](#) had significant influence, leading to GSA's establishment of new sustainable asphalt and concrete standards. The funding will cover procurement of materials prioritized by the Buy Clean Initiative, including asphalt, concrete, steel, and flat glass.
- \$975 million for installation of emerging and sustainable technologies that will help meet GSA net-zero goals to decarbonize the portfolio.
- \$250 million for high performance green building.

At the GreenBuild Conference, [GSA Administrator Robin Carnahan announced](#) that none of GSA's IRA dollars will go toward installing new fossil fuel equipment.

In the follow-up discussion, Committee members commented on the need to identify new opportunities for backup generation for buildings, including employing battery storage and using electrical vehicles themselves as batteries via bi-directional charging.

Green Leasing

Ken Schelbert and Alexandra Kosmides from the Public Buildings Service (PBS) Office of Leasing discussed their Office's interest in gaining Advisory Committee guidance on how to fulfill the green leasing requirements outlined in the EO 14057 Implementing Instructions, including:

- All new lease solicitations issued by FY 2024, for at least 25,000 gross square feet where the Federal Government occupies at least 75% of a building, are to be *green leases*.
- Green leases must require the lessor to *report annual data* on facility GHG emissions, energy and water consumption, and waste generation.
- New lease solicitations issued by FY 2031 greater than 25,000 rentable square feet and where the federal government leases at least 75% of the total must be in *net zero emissions buildings*.

GSA is on the demand side of this equation, facing the challenge that, for now, the supply of qualifying buildings and building managers is quite limited. How can GSA influence the market to supply the needed sustainable, net zero emissions buildings?

PBS is considering potential steps toward net-zero leases, including:

- Piloting a lease procurement strategy with net-zero as a major evaluation factor;
- Monitoring the building inventory for existing or pending leases that would be eligible for net-zero support;
- Looking at buildings rated by third party net-zero green building certification systems;
- Targeting buildings and leases in cities with aggressive net-zero building codes;
- Reaching out to federal agencies and commercial real estate companies for collaboration opportunities.

The Leasing Office plans to create incentives for on-site renewable power generation as well as for greater energy efficiency and reduced energy use intensity, with the increased use of selection factors in leasing procurements. PBS will also continue to work to minimize its leased footprint.

In the follow-up discussion, Committee members discussed what types of tools, pilots or business case presentations could be most helpful in spurring the commercial building marketplace to supply the net zero and sustainable buildings that GSA seeks to lease. Cost concerns will need to be addressed, weighed against the potential for the profits to be made by companies that become recognized leaders in sustainable building.

Advisory Vote on New Committee Chair

Running unopposed, Ralph DiNola was recommended by the group to be the new Committee Chair. He expressed interest in having a Co-Chair to expand representation, a position for which Fernando Arias volunteered.

Motion: Ralph DiNola and Fernando Arias were recommended to be the new Chair and Co-Chair of the GBAC.

They will begin as acting until GSA completes formal action to appoint them.

Federal Building Decarbonization: Proposed Advice Letter Update

Clay Nesler, WRI and Kent Peterson, P2S Inc.

Co-Chairs, Federal Building Decarbonization Task Group

In its second year, the Task Group focused on how to help GSA and other federal agencies decarbonize their building stock in two ways:

- 1) Building Portfolios: Use portfolio building asset data to provide a high-level roadmap of where to focus efforts towards reducing building carbon emissions.
- 2) Individual Building Decarbonization: Use building asset data, energy audit data, and other specific building information to generate a list of potential measures and packages targeting different scenarios towards operational GHG emission reductions.

For the prioritization analysis, the Task Group built a draft building prioritization tool, designed to classify buildings as candidates for decarbonization, overlay potential clean energy improvement strategies and calculate environmental and economic impacts of applying them. To help the group test this tool, GSA provided anonymized data from 25 different PBS buildings across the country including energy sources and uses plus GHG emissions at the building and electrical grid levels.

The proposed approach also included screening for building indoor environmental quality improvements and environmental justice opportunities, respectively by employing GSA's Buildings Scorecard and the White House [Climate and Economic Justice Screening Tool](#).

Using suggested decarbonization approaches, it was estimated that GSA could reduce operational GHG emissions at this sample of buildings by 28%, or an average of 19,000 tons of carbon, resulting in projected cost savings of \$4 million.

The Task Group also identified a potential long term implementation path for the tool, proposing to incorporate it into [DOE's SEED platform](#), an open-source, secure, enterprise data platform for managing portfolio scale building performance data from a variety of sources.

Once agencies identify which buildings merit priority focus, they then need to define how they're going to approach decarbonizing them. The Task Group also drafted an implementation tool concept specification to help answer the question of how to proceed using more detailed building-specific information. It may be particularly useful for smaller to medium sized facilities that often lack the benefit of expert teams with the resources to conduct deep energy analyses.

The proposed approach would consider decarbonization strategies including deep optimization of building systems, a range of energy efficiency measures, comprehensive deep energy retrofits, building electrification and installation of renewable energy systems.

For this proposed approach, the Task Group also identified an existing tool into which it may be usefully integrated: [DOE's Audit Template](#) tool, which is used by local governments to collect, store and report building energy audit data and generate audit reports outlining the building energy use by energy type and end use and the cost and payback of energy saving opportunities.

The Task Group, then, proposed three recommendations to provide to GSA:

1. GSA and other federal agencies should use the proposed building prioritization methodology, based on the proof-of-concept spreadsheet tool, to screen all significant and long-term owned assets for decarbonization opportunities.
 - a. GSA should request that DOE support the integration of the building prioritization tool into the DOE SEED platform.
 - b. GSA should incorporate use of the building prioritization tool as a means of complying with EO 14057 and the Inflation Reduction Act.
2. GSA and other federal agencies should use the proposed building decarbonization project implementation methodology for existing buildings.
 - a. GSA should request that DOE support the further development of the existing DOE Building Audit Template tool to provide building decarbonization implementation recommendations for existing buildings as outlined herein.
 - b. The tool should utilize building asset data, energy audit data, and other building information to identify a building decarbonization plan with

decarbonization measures, organized into packages, and phased over time to achieve operational net zero emissions goals.

3. GSA should expand data collection on smaller (non-covered) facilities and perform EPA Portfolio Manager analysis so they can be analyzed using the building prioritization and project implementation process.

For the next stage of work, the Task Group suggests a more detailed evaluation of opportunities for federal building and campus electrification, including the particular challenges of decarbonizing district energy plants and combined heat and power plants.

In the follow-up discussion, Committee members questioned the extent to which smaller buildings are a significant factor in federal decarbonization plans. For GSA, around 175 generally larger buildings represent 75% of agency buildings energy use (and hence, are considered “covered buildings” for DOE FEMP tracking purposes). While GSA owns about another 1200 buildings, their combined energy and carbon footprint is considerably smaller. As a significant number of such buildings may be underutilized, building disposal will be part of GSA’s decarbonization strategy.

Committee members also raised the planning challenges created by the changing GHG emissions profile of the electric grid. The Task Group did calculations using [NREL’s Cambium database](#), which attempts to predict coming changes, showing how this can be factored into planning.

Another challenge is federal campuses where energy is not metered at the building level; however, estimates can be made as to building energy allocations in such cases.

Motion: The Acting Chair and Co-Chair recommend moving forward with finalizing the Advice Letter to GSA (approved as it is written, with further comment incorporation, as provided), and to continue the Task Group into the recommended third phase.

Result: Approved with 12 yes votes and 1 abstention.

In response, the Federal Building Decarbonization Task Group will extend its work into 2023 with a focus on building and campus electrification.

Public Comment Period

An observer asked whether lifecycle cost analysis was included in the Task Group’s draft tools. In fact, net present value analysis capabilities were included in the draft prioritization tool, including a discount rate to incorporate cost savings over time, with flexibility to specify the years anticipated.

New Committee Topics & Directions

This session provided an opportunity for Committee members to brainstorm potential new topic ideas for the GBAC to pursue. Ken Sandler noted that the number of task

groups created are limited to what OFHPGB can support with staff and contractor resources, generally 1-2 groups at a time.

However, task groups are not the only way to move these ideas forward; workshops, town halls, etc. could be other approaches for the Committee to conduct its work of developing green building advice to GSA. In the past, the group has held such events through partnerships with organizations like the National Academies and the NAACP.

Potential new topics include:

- Spurring the market to deliver green and net-zero leases for GSA buildings.
 - Demonstrate the business case for building net zero emissions buildings to commercial building landlords.
- Identifying the role of health and comfort, including ventilation and indoor environmental quality (IEQ) standards, in building decarbonization.
 - Develop federal building standards for IEQ and ventilation, with adjustments for demographic variations among occupants.
- Advancing electric vehicle charging at federal facilities.
 - Identify opportunities and risks as they relate to electric vehicles and building electrification, including advanced concepts of managed and bidirectional charging.
- Adapting plumbing systems to low flow water systems.
 - Bring water pipe sizing and standards up to date with the decreased water volume flowing through them to advance water quality, water efficiency, and energy efficiency.

Closing Comments

Ken Sandler thanked everyone for their contributions today. He singled out the new acting Chair and Co-Chair for stepping up to challenge of committee leadership.

Kevin Kampschroer concluded with the comment that our ultimate goal is implementing policies to ensure that the members of future generations, like his granddaughter, can have a planet to safely live and work on.