STATEMENT OF

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Good morning, Chairwoman Titus, Ranking Member Meadows, and members of the Subcommittee. My name is Kevin Kampschroer and I am the Director of the Office of Federal High-Performance Buildings (OFHPB) within the Office of Government-wide Policy (OGP) and the Chief Sustainability Officer for the U.S. General Services Administration. Thank you for inviting me today to discuss our work on efficiency and resiliency in Federal building design, construction, and operation.

GSA's mission is to deliver value and savings in real estate, acquisition, technology, and other mission-support services across government**.** GSA leads the way in maximizing the effectiveness of every tax dollar by supporting more than $55 billion in annual procurement spending, while managing approximately 370 million square feet of space in over 8,700 owned and leased properties across the country. GSA also owns and maintains a fleet of over 214,000 vehicles used by over 75 other Federal agencies.

GSA's approach to sustainability focuses on our major mission areas of real estate, procurement, and fleet, and our core role as service provider to other agencies. Our mission is to provide Federal agencies with the workspaces, services, products, and vehicles they need to accomplish their missions today. Our commitment to sustainability is to carry out this mission cost-effectively, while advancing the economic, civic, and environmental well-being of the United States.

To support investment in GSA's portfolio of more than 1,600 buildings, I would ask this Committee to advocate for the President's FY20 budget request. Fully funding GSA's major and minor repair and alteration programs will allow GSA to address a portion of the $1.4 billion repair backlog while also improving the energy efficiency and performance of GSA's buildings.

Congress created my office within GSA to enable and enhance Federal leadership in sustainable real property portfolio policy, management and operations. Authorized in December 2007 under Section 436 of the Energy Independence and Security Act (EISA), OFHPB develops best practices, guidance and tools for government-wide use to advance building innovations in planning, design, and operations to reduce costs, and enhance human health and performance. OFHPB partners with GSA's Public Buildings Service and other Federal agencies to pilot and implement the high-performance building practices. In this effort, OFHPB has played a major role in the advent of Energy Savings Performance Contracts (ESPCs) across Government.

Benefits

High-performance Federal buildings provide value for the taxpayer and for the public through both life-cycle cost benefits and positive effects on human health and performance. Compared to average buildings, high-performance buildings use less energy, water, and material resources; have better indoor environmental quality; reduce air and water pollution, and produce less waste; use environmentally preferable products; have integrated systems; use local transportation to reduce adverse impacts on the local community; and improve conditions for the health and productivity of the buildings' occupants.

EISA section 401(13) states that a high-performance green building must not just perform well mechanically, but perform to improve the health and enhance the performance of the occupants. The Environmental Protection Agency (EPA) has found that indoor air can contain volatile organic compounds, such as those found in paints and cleaning products, at concentrations indoors that are 2-5 times, and sometimes as much as 100 times, higher than outdoor air. Poor indoor air quality associated with such pollutants as mold, tobacco smoke, and radon can also increase respiratory diseases and the risk of cancer[1]. Lighting quality, including levels of daylighting and views, have significant impacts on employee performance and satisfaction.

GSA has conducted 3 studies in the past 10 years on improvements to its high-performance buildings, and each study has found that high-performance buildings save energy, save water, cost less to operate, produce less waste, and have more satisfied occupants compared with typical buildings. In short, they deliver cost savings and tenant satisfaction. The latest study, conducted in 2018, *The Impact of High-Performance Buildings*[2] *compared* 100 GSA high-performance buildings to 100 GSA legacy stock buildings looking at actual performance data in five key metrics from three full years of operation. Compared to legacy stock buildings, GSA's high-performance buildings have 23 percent lower energy use, 28 percent lower water use, 23 percent lower building operating expenses, 9% less waste landfilled and a 2 percent higher overall tenant satisfaction. Energy and water savings are even greater when compared to industry average benchmarks – 43 percent for energy and 35 percent for water.

By striving for annual improvement in energy and water efficiency targets (as required by EISA and related laws), GSA estimates that by the end of fiscal year 2019, GSA controlled buildings will have saved or avoided hundreds of millions of dollars in energy and water expenses for taxpayers relative to

[1] US Environmental Protection Agency, Indoor Environments Division, http://www.epa.gov/iaq/voc.html

[2] US General Services Administration. Impact of High-Performance Buildings https://www.gsa.gov/cdnstatic/GSA%20Impact%20of%20HPB%20Paper%20June%202018_508-2%20(1).pdf

2009 spending levels. These efforts have benefitted Federal agencies and taxpayers by lowering utility bills.

Inter-Agency Work and Coordination

GSA has a long history working with our Federal partners, the Department of Energy (DOE) National Laboratories, and the private sector on these issues. Consistent with its EISA charter, OFHPB has dedicated resources and expertise to a variety of interagency high-performance buildings initiatives. OFHPB coordinates much of this agenda through existing Federal interagency bodies – such as the Interagency Sustainability Working Group, which GSA co-chairs with DOE. We work with the DOE Federal Energy Management Program and the Buildings Technology Office on ESPCs, on providing training for Federal facility managers, and on evaluating new and emerging building technologies. In addition, GSA participated in the creation of the DOE's Commercial Real Estate Energy Alliance[3].

GSA uses several means to share information, provide guidance, and aid other agencies in improving building performance. GSA's Office of Government-wide Policy issues the Federal Management Regulations[4] and provides agencies with access to guidance and best practices through tools like the Sustainable Facilities Tool, Green Procurement Compilation, and GSA Bulletins. GSA invests in next-generation building technologies based on their actual performance, and recommends such technologies for broad deployment only after they have demonstrated good financial payback, cybersecurity and claimed performance factors via actual installation and operation in the real world of our portfolio of buildings. GSA tests new technologies in conjunction with the Department of Defense, the DOE and the DOE National Laboratories. The results of these tests are available for all agencies to use in evaluating building investments, and the results include information on both financial performance and operational performance results. Technologies that GSA has recently recommended for broader deployment in Federal facilities include next generation (such as magnetic levitation) chillers, alternative water treatment technologies for cooling towers, low-e window retrofits and LED upgrades. Over the past five years, GSA has deployed these and other advanced technologies in over 200 GSA-owned Federal buildings, resulting in annual savings of $7 million.

High-performance Building Certification System Review

One of the key areas of inter-agency consultation is in the review of High-performance Building Certification Systems. Sections 433(a) and 436(h) of EISA require OFHPB to complete a review of high-performance building certification systems every five years and provide its findings to the Secretary of Energy. The Secretary then identifies a certification system most likely to encourage a comprehensive and environmentally sound approach to the certification of high-performance buildings within the Federal sector based on a review of GSA's findings.

The purpose of GSA's review is to provide an objective, independent evaluation of the alignment of certification systems with Federal high-performance building requirements for new construction and existing buildings. GSA evaluates certification systems available in the market based on a list of

[3] https://betterbuildingsinitiative.energy.gov/alliance/sector/commercial-real-estate

[4] The Federal Management Regulation applies to Federal agencies, including GSA's Public Buildings Service, operating under, or subject to, the authorities of the Administrator of General Services. These policies cover the acquisition, management, utilization, and disposal of real property by Federal agencies that initiate and have decision-making authority over actions for real property services.

effectiveness, development, and conformance criteria found in the 2014 DOE certification system rule[5], EISA and the Guiding Principles for Sustainable Federal Buildings.

GSA is now completing its third review of certification systems and plans to deliver the results of its latest review to the Secretary of Energy later this year. Previous reviews have found that while each building certification system offers a unique framework and approach to achieving building certification, they all support aspects of building design, construction, operation and maintenance that lead to high-performing buildings.

GSA's previous review in 2014[6] found that both the LEED and Green Globes systems were most aligned with Federal criteria. GSA recommended that agencies use the system that best meets their mission.

Resiliency

GSA's Public Buildings Service (PBS) incorporates resiliency by integrating the latest building codes (such as seismic or wildfire) and resilience methodologies into its existing processes and standards, such as PBS' Capital Investment and Leasing Program and the Facilities Standards for PBS. GSA also collects lessons learned from building performance in recent extreme weather incidents. Within this context, each capital project is screened for multiple factors including: 1) the observed extremes and expected long term changes during the asset service life; 2) if the asset houses a core mission or mission dependent function that is currently or is expected to be vulnerable to extreme weather or long term changes; and 3) if the asset is designated as culturally or historically significant. From this analysis, GSA engages contracted, licensed design professionals to include risk management throughout the design and delivery of the building project. These activities are undertaken by GSA to safeguard Federal investments and ensure reliable delivery of mission and operations in changing conditions. The National Institute of Building Sciences has found that mitigation saves $11 for every $1 invested[7].

The American Society of Civil Engineers, the American Institute of Architects, the American Society of Landscape Architects, ASHRAE and others are each advancing the concept of resiliency, and GSA is aware of the standards development, resilience training, and ethical commitments of these professional societies. GSA is also engaged with multiple entities that are developing standardized metrics for resilience. Progress and leadership by Federal agencies such as the Federal Emergency Management Agency (FEMA), the U.S. Army Corps of Engineers (USACE), Federal Highway Administration (FHWA) and the National Aeronautics and Space Administration (NASA) serve as useful resilience and risk management resources to GSA. Collectively, there is a demand for American design innovation for a more resilient and secure Nation.

This is an issue that affects the Federal Government broadly, and it is through inter-agency cooperation and knowledge sharing that agencies are progressing. GSA participates with other key agencies such as Department of Homeland Security - Cybersecurity and Infrastructure Security Agency (CISA), FEMA and

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[5] US Department of Energy. Green Building Certification Systems Requirement for New Federal Buildings and Major Renovations of Federal Buildings Final Rule https://www.ecfr.gov/cgi-bin/text-idx?SID=18013effcff886527d31170b774b0771&mc=true&node=se10.3.433_1300&rgn=div8
https://www.energy.gov/eere/femp/downloads/green-building-certification-systems-requirement-new-federal-buildings-and-major

[6] https://www.gsa.gov/gbcertificationreview

[7] National Institute of Building Sciences. Natural Hazard Mitigation Saves Study https://www.nibs.org/page/mitigationsaves

the USACE to better understand infrastructure risk and methods for enhancing resiliency. This also extends to energy system resilience, which focuses on preparing for and adapting to changing conditions and withstanding and recovering rapidly from disruptions, which includes deliberate attacks, accidents, or naturally occurring threats or incidents. GSA is engaged in the MitFLG (Mitigation Federal Leadership Group) and has supported the development of the National Mitigation Investment Strategy (NMIS) and multiple other strategic resilience initiatives. GSA is also engaged in CISA's Resilient Infrastructure Planning and Development Working Group.

Federal Buildings Personnel Training Act of 2010

Congress has recognized that a crucial component of building performance, especially complex modern buildings, is the people who operate them. Both public and private sector building operators have recognized that in the U.S., there is a shortage of skilled building professionals needed to keep buildings operating at peak efficiency.

The Federal Buildings Personnel Act of 2010 (FBPTA) requires GSA, in consultation with representatives of professional societies, industry associations, and apprenticeship training providers, "to identify, develop and annually update core competencies for Federal personnel performing building operations and maintenance, energy management, safety and design functions."

The FBPTA leverages existing private industry and Federal Government training to develop Federal facilities professionals with the knowledge, skills and abilities needed to efficiently and responsibly operate, maintain and manage hundreds of millions of square feet of taxpayer-funded buildings and related facilities throughout the world. A highly developed facilities workforce reduces the cost of operating and maintaining buildings.

GSA annually updates the FBPTA Competency Model to ensure it contains the specific skills needed by building professionals to be effective in their respective roles. GSA created an online tool, Accelerate FM (AFM), to advance the outcome of the use of the FBPTA Competency Model for use government-wide and to eliminate the duplication of effort by other agencies. Agencies and their building professionals use this tool to identify specific responsibilities at different levels of expertise, establish a training baseline, identify gaps in training, and align existing industry and government training to fill identified training gaps while at the same time providing clear justification for investment in that training.

GSA created an exam within AFM called the Federal Skills Assessment Test (FEDSAT), which is used to jumpstart individual participation in facilities workforce development by leveraging existing facilities training and related content to educate individuals on the most high impact skills and knowledge that will yield the most immediate results in actual facility performance.

GSA continues to pursue engagement with Federal agencies, training providers and private industry to maintain the FBPTA competency model and identify new relevant training resources. For example the

latest FBPTA Competency Model update contains 19 newly identified cyber security related competency performance areas deemed to be critically important in the emerging landscape of web enabled facility systems. Recently, the Department of Defense approached GSA about using this tool to help identify cyber-security skills gaps, and training requirements, to support implementation of Executive Order 13870, *America's Cybersecurity Workforce.*

Conclusion

Putting all of these tools together, and ensuring we use the best evidence available to make decisions, will allow the Federal Government to make strides in designing, operating, and maintaining high performance Federal buildings. GSA is proud to be part of that effort.

Thank you again for this opportunity to come before you and we look forward to working with this Subcommittee to further improve the efficiency, effectiveness, and resiliency of Federal buildings. I am available to address any questions you may have.