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Introduction

Good morning Chairman Upton, Ranking Member Rush and Members of this Subcommittee. My name is Kevin Kampschroer, and I am the U.S. General Services Administration's Director for the Office of Federal High-Performance Green Buildings as well as GSA's Chief Sustainability Officer. I appreciate being invited here today to testify on the Federal Government's policy and experience regarding public-private partnerships in achieving energy savings for our Federal buildings.

The Office of Federal High-Performance Buildings, of which I am the director, was created by Congress through the Energy Independence & Security Act (EISA 2007), develops best practices, guidance and tools for government-wide use. We advance Federal green building innovations in planning, design, and operations to reduce costs, and enhance human health and performance. The Office partners with the rest of GSA and other agencies and organizations to pilot, promote and implement the most promising high-performance sustainable building practices, including Energy Savings Performance Contracts (ESPCs), thereby reducing duplication through information-sharing and cooperation, and resulting in a government that delivers more value at a lower cost.

GSA's mission is to deliver value and savings in real estate, acquisition, technology, and other mission-support services across government. In support of that mission, GSA's Public Buildings Service manages over 371 million square feet of space, housing tenants from 65 Federal agencies, encompassing workspaces for 1.1 million Federal employees. I will discuss the use of ESPCs and utility energy service contracts and the savings we have achieved. I will also discuss the GSA's National Deep Energy Retrofit Program and share with you the lessons we have learned.

Executive Order 13834, issued on May 17, 2018, reinforces the Trump Administration's commitment to meeting energy and environment statutory requirements in a manner that increases efficiency, optimizes performance, and eliminates unnecessary use of resources while also protecting the environment. To implement the Executive Order, agencies must prioritize actions that reduce waste, cut costs, enhance the resilience of Federal infrastructure and operations, and enable more effective accomplishment of their missions.

GSA has a long history working with private industry to develop and implement ESPCs for our Federal buildings and we have seen the benefits ESPCs can achieve.

Reducing energy consumption while also pushing Federal buildings to be as energy efficient as possible not only saves the government money, it also makes our buildings more resilient in the long-term. GSA has completed 3 rounds of deep energy retrofits, and is in the midst of the fourth, assembling buildings across the country and issuing the Notice of Opportunity in the coming months.

Energy-based Public Private Partnerships

There are three main types of contracts that can foster energy and water savings and efficiency: energy savings performance contracts, utility energy service contracts, and power purchase agreements.

ESPC is the most frequently used contract that improves building efficiency with guaranteed performance and savings. With an ESPC, there is no requirement for upfront capital cost to the government. Importantly, ESPCs have been proven to work. For example, an in-depth study by the Oak Ridge National Laboratory showed that the actual savings to the Federal Government were 1.96 times the guaranteed savings under an ESPC.

Many Federal agencies have repair backlogs[1] --estimated government-wide to be over $150 billion, with GSA's backlog alone currently standing at $1.455 billion-- the ESPC is an important tool that can be leveraged to assist in maintaining deteriorating infrastructure when partnered appropriately with available appropriations.

The utility energy service contract (UESC) is similar to the ESPC, with one difference: the contract is between a federal agency and its serving utility rather than between a federal agency and an energy services company. GSA has awarded $15.5 million in UESCs and has had similar positive results as it has with ESPCs. In total, GSA UESCs have resulted in a 38 percent average energy use reduction and saving $459,000 in annual energy costs. GSA has also provided its contracting services to other agencies for the installation of energy projects, both on military bases and civilian facilities.

The power purchase agreement (PPA) can be used to purchase electricity from specific generation sources. For civilian agencies, these agreements are limited to a term of 10 years by statute[2]. GSA uses PPAs where the price paid is equal to or less than the market price for electricity. GSA has executed PPAs for itself, such as an aggregated set of solar systems in Washington D.C., with a total capacity of 2.7 megawatts (MW), a total estimated annual energy

[1]The Financial Report of the United States Government of Fiscal Year 2017 estimated that government-wide deferred maintenance and repair was approximately $151.6 billion.

[2] Note, however, that Federal agencies may purchase electricity from certain onsite energy sources for a term exceeding ten years using the ESPC Energy Sales Agreement project structure developed by the U.S. Department of Energy: FEMP ESPC Energy Sales Agreement
https://www.energy.gov/eere/femp/energy-savings-performance-contract-energy-sales-agreements

delivery of 3.5 million kilowatt-hours per year, and cost savings of $281,000 annually. GSA has also supported other agencies, including by procuring power from three 30 MW solar fields for three military bases in Georgia, and 18 MW for Ft. Huachuca in Arizona. Such agreements can be a key component to facility resiliency.

GSA has been using these types of public private partnership contracts since 1989 and has invested $1.03 billion in both ESPCs and UESCs. This investment has resulted in an annual energy savings of 4 trillion BTUs in GSA facilities and $2.3 billion in guaranteed contract savings. These public private partnerships help GSA upgrade Federal buildings with whole system solutions, reduce long term operating costs, reduce vulnerabilities to energy price volatility, meet energy reduction mandates, and create manufacturing, construction and engineering jobs.

Deep energy retrofits

A deep energy retrofit is a whole-building analysis and construction process that uses integrated design to achieve much larger energy savings than conventional energy retrofits, often generating the largest opportunity for returns on investment. Deep energy retrofits consistently save between 30 and 60 percent of energy costs compared to a standard retrofit, which typically will produce between 10 and 20 percent savings.

GSA developed this process with the Department of Energy and the Department of the Army to improve the ESPC results from the historic average savings of 18 percent. We did this in collaboration with all of the companies that had been providing ESPC services to the government.

GSA's deep energy retrofit program has now awarded 32 contracts totaling a $570 million investment in 73 locations. These contracts have provided an overall energy savings of 34 percent, generating $33 million in annual savings. One contract, which covers the New Carrollton Federal Building and the Silver Spring Metro Center 1 in Maryland, has achieved over 60 percent energy savings, and continues to perform after four years of measurement and validation.

For smaller projects, GSA teamed with the Department of Energy to create the ESPC ENABLE program, which uses an existing GSA Schedule Contract and couples it with pre-planned, streamlined ways to accomplish simple improvements. This program has been used by 12 agencies in addition to GSA, for projects saving $83 million with an investment of $55 million. There are 24 certified contractors on the ENABLE list, including 9 small businesses and 3 disabled veteran-owned businesses.

Additional Lessons Learned

ESPCs have proven to be a successful way for the Federal Government to partner with the private sector to secure significant savings to the taxpayer, by improving Federal infrastructure

and reducing energy use. The lessons learned below provide a sampling of the ways in which the Federal Government has been able to improve the program over time.

Centralize ESPC contracting, and reduce time to award

Centralizing ESPC contracting in dedicated units reduces the timeline for project execution and increases savings. In GSA's case, during its first round of deep retrofit program, GSA reduced the time to award from 2 years to 1 year, significantly reducing contract overhead costs and increasing the net return to the government. By adhering to stricter timelines, and by being more responsive, contractors were able to provide better terms and better pricing for project development. This saved considerable overhead on both the Government's and the contractors' parts, and thus provided more money for accomplishing building improvements. Centralized contracting helps those offices less familiar with the ESPC process and enables consistency across GSA. It improved the initial building selection process, resulting in better outcomes. It improved the sharing of specific solutions that had proved successful, and it simplified record-keeping and reporting.

Aggregate work within 25 year limit

GSA also found it important to encourage project teams to aggregate short- and long-term measures to maximize synergy and build long-term value. This is perhaps the most important lesson learned. The ability to evaluate all the individual measures together leads to greater savings, because of the interaction of building systems. An investment in window replacement, for example, does not typically pay back in under 25 years. However, when window replacement is combined with chiller and heating plant improvements, the windows may reduce the load and thus reduce the size of the chiller, saving money in a way not possible without window replacement. There are dozens of connections like this one, where an improvement in one system leads to lowering costs in another. The removal of artificial project limits, such as maximum payback thresholds, allowed for more opportunities for innovation.

Emphasize deep retrofits

Clear and consistent project direction from the government yields the greatest savings, and deep energy retrofits do not happen without strong government leadership,

Select the right buildings

Not every project is suitable for an ESPC, and it is important to first consider buildings that have not undergone recent energy retrofit projects. GSA also found it beneficial to coordinate current or upcoming building renovations when identifying projects. Existing law allows agencies to use appropriated funds with ESPC funds provided by the third party contractor. GSA has used this combination to achieve related work to reduce its deferred maintenance backlog. The cost of energy also has a significant influence on how much work can be done since the work is paid for in energy savings: the lower the energy costs, the lower the savings amount can be.

Closing

Thank you for the opportunity to testify today. Public private partnerships, especially ESPCs, are valuable tools agencies can leverage to increase building efficiencies and save money while not

relying on annual appropriations. GSA has seen significant cost savings and we are continuously sharing our lessons learned with other agencies and ESPC contractors to push for greater savings. I am pleased to be here today, and I am happy to answer any questions you may have.