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Opportunities for PBS to Improve Management and Oversight of Its Federal Aggregated Solar Procurement Pilot Contracts

Report Number A201020/P/9/R21008
September 30, 2021

Executive Summary

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Why We Performed This Audit

This audit was included in the GSA Office of Inspector General's *Fiscal Year 2020 Audit Plan*. The Federal Aggregated Solar Procurement Pilot (FASPP) is the first federal aggregated contract of its kind. Its goal is to install photovoltaic panels at federal buildings in GSA's Pacific Rim Region to generate electricity that GSA will purchase at lower rates than those charged by the local utility companies.

Our audit objective was to determine whether the GSA Public Buildings Service's (PBS's) selection and oversight of FASPP sites maximize energy savings and comply with applicable laws, regulations, policies, safety standards, and contract requirements.

What We Found

According to our calculations, between Fiscal Years 2018 and 2020, PBS's FASPP saved the government over \$330,000 in energy costs. However, we found that PBS could improve its site selection, administration, and oversight of the FASPP contracts. PBS's selection of two FASPP sites resulted in PBS paying more for electricity or not achieving expected energy savings. Furthermore, PBS's inadequate oversight of the FASPP contracts resulted in safety hazards, substandard energy production, violations of Buy American Act and Trade Agreements Act requirements, and lost opportunities to maximize energy savings.

What We Recommend

Based on our findings, we made several recommendations to the PBS Regional Commissioner for the Pacific Rim Region. These recommendations include improving site selection for future FASPP sites and identifying methods, if any, to reduce costs for energy at the Carson City Federal Building and early contract termination at the U.S. Geological Survey Menlo Park Campus. Also, we recommend that PBS take steps to address safety issues at the U.S. Geological Survey Menlo Park Campus and the Robert F. Peckham Federal Building.

Furthermore, PBS should implement controls to ensure the solar energy contractors comply with minimum energy production requirements, Buy American Act and Trade Agreements Act requirements, and maintenance requirements. Lastly, PBS should work with the U.S. Department of Energy and PBS's Office of Facilities Management, Energy Division, to evaluate: (1) installing a solar battery storage system at the Robert F. Peckham Federal Building and (2) the most economical and appropriate use of solar renewable energy certificates.

The PBS Regional Commissioner stated that he agreed with our recommendations; however, his detailed response indicated he did not completely agree with two recommendations. PBS's response can be found in its entirety in ***Appendix C***.

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Introduction

We performed an audit of the GSA Public Buildings Service's (PBS's) Federal Aggregated Solar Procurement Pilot (FASPP) contracts awarded in GSA's Pacific Rim Region.

Purpose

This audit was included in the GSA Office of Inspector General's *Fiscal Year 2020 Audit Plan*. The FASPP is the first federal aggregated contract of its kind. Its goal is to install photovoltaic (PV) panels at federal buildings in GSA's Pacific Rim Region to generate electricity that GSA will purchase at lower rates than those charged by the local utility companies.

Objective

Our audit objective was to determine whether PBS's selection and oversight of FASPP sites maximize energy savings and comply with applicable laws, regulations, policies, safety standards, and contract requirements.

See **Appendix A** – Scope and Methodology for additional details.

Background

PBS established its FASPP for participating federal agencies to purchase solar electricity produced from PV systems with no upfront costs. Under the FASPP, a solar energy contractor installs PV systems at federal buildings; PBS only pays for the amount of energy produced from the PV systems. PBS anticipated that it would save money by paying less for electricity generated from the PV panels at FASPP sites than electricity rates charged by the local utility companies. PBS estimated the savings under its FASPP to be worth over \$4 million during the 10-year base period and 10-year option period of the contracts. Because the solar energy contractor is responsible for installing the PV systems, PBS also estimates that it has avoided over \$6.6 million in upfront capital costs.

According to FASPP planning documents, in addition to saving money, renewable energy generated from FASPP sites could help GSA comply with federal energy requirements. Furthermore, the Energy Policy Act of 2005 requires agencies to consume no less than 7.5 percent of total annual electric energy from renewable sources. In addition, Executive Order 13834, *Efficient Federal Operations*, requires agencies to meet their statutory requirements in a manner that increases efficiency, optimizes performance, eliminates unnecessary use of resources, and protects the environment. Both Title 41 of the Code of Federal Regulations (CFR), Section 102-82.10, and Executive Order 13834, *Efficient Federal Operations*, require agencies to purchase energy economically and efficiently.

Prior to awarding the FASPP contract, PBS received technical assistance from the U.S. Environmental Protection Agency, the U.S. Department of Energy's Federal Energy Management Program (FEMP), the Lawrence Berkeley National Laboratory, and the National Renewable Energy Laboratory (NREL). These entities assisted PBS in identifying potential sites, conducting feasibility studies, estimating PV production, calculating potential savings, and evaluating offerors' bids.¹ The technical assistance included recommendations regarding the location and installation of the PV systems and the likelihood of lowering energy costs and meeting the 7.5 percent renewable energy use requirement.

On April 2, 2015, PBS issued a solicitation for the FASPP to enter into a Power Purchase Agreement (PPA) contract with a single contractor for the purchase of electricity from PV systems at nine sites in California and Nevada. The sites included eight GSA properties and one U.S. Forest Service property. Under a PPA, the contractor invests in and retains ownership of the PV systems and is responsible for their installation, operation, and maintenance. The government only pays for each kilowatt-hour (kWh) of energy produced by the PV systems.

In December 2015, PBS awarded FASPP Contract Number GS-09P-16-KS-C-0002 to SolarCity Corporation (SolarCity) for the installation of PV panels and equipment at the following sites:

- Carson City Federal Building; Carson City, Nevada
- C. Clifton Young Federal Building; Reno, Nevada
- Sacramento Federal Building - Cottage Way; Sacramento, California
- Robert F. Peckham Federal Building; San Jose, California
- U.S. Geological Survey (USGS) Menlo Park Campus; Menlo Park, California
- Leo J. Ryan Federal Records Center; San Bruno, California
- John F. Shea Federal Building; Santa Rosa, California
- James R. Browning U.S. Courthouse; San Francisco, California
- U.S. Forest Service - Pacific Southwest Region - Mare Island; Vallejo, California (this site is owned by the U.S. Forest Service)

PBS later removed the John F. Shea Federal Building in Santa Rosa, California, from the FASPP on April 4, 2018, due to concerns with roof leaks and the additional cost to repair them after PV system installation. PBS also removed the James R. Browning U.S. Courthouse in San Francisco, California, on March 3, 2017, after determining that the system was not commercially feasible due to power grid restrictions for PV systems in downtown San Francisco. Therefore, PV systems were installed at seven sites: six GSA and one U.S. Forest Service. Our audit focused on the six GSA sites.

In February 2017, PBS split the FASPP contract into three separate contracts to accommodate the different construction schedules of the seven sites. In February 2018, PBS transferred the FASPP contracts to Tesla Energy Operations, Inc. (Tesla), after the company acquired SolarCity.

¹ Feasibility studies determined the financial viability of the proposed FASPP sites. The studies included customer agencies' objectives, PV system configurations, and FEMP's recommendations for including the site in the FASPP.

In November 2018, PBS transferred the FASPP contracts for the California locations in Menlo Park, San Bruno, and San Jose after Tesla sold these to NextEra Energy, Inc. (NextEra).

Under FASPP contracts, there are no upfront costs to PBS. Instead, PBS pays the solar energy contractors for energy at fixed rates for each kWh produced by the solar panels. The contracts also stipulate a minimum production requirement, which is based on an annual amount of energy produced at each site (i.e., production year). If the PV systems do not meet the minimum production requirement and PBS pays more for energy because of the shortfall, then the solar energy contractor is liable for payment to PBS. This payment is calculated by the difference between the FASPP PPA rate and a fixed local utility rate, multiplied by the energy shortfall amount. The awarded energy rates, system start-up dates, and required production for the first year of operation are shown in *Figure 1*.

Figure 1 – Minimum Production Requirements for Completed Sites for Production Year 1

| Site | PPA Rate Per kWh | Start-Up Date | Minimum Required PV Energy Production for Year 1 (kWh)* |
|--|------------------|---------------|---|
| Carson City Federal Building | \$0.115 | 4/21/2018 | 368,000 |
| Sacramento Federal Building - Cottage Way | \$0.134 | 4/28/2018 | 2,194,000 |
| C. Clifton Young Federal Building | \$0.121 | 5/04/2018 | 540,511 |
| Robert F. Peckham Federal Building | \$0.134 | 12/18/2018 | 150,000 |
| Leo J. Ryan Federal Records Center (Ryan Federal Center) | \$0.097 | 12/18/2018 | 870,000 |
| USGS Menlo Park Campus (USGS Campus) | \$0.105 | 1/03/2019 | 1,085,000 |

*The required production for each site in subsequent years is reduced annually by 0.7 percent due to system degradation.

On November 22, 2017, PBS issued a Letter of Concern to SolarCity that identified issues related to its project management and deliverables for the subject contracts. Based on issues identified in this letter, we initiated this audit of PBS’s FASPP contracts on April 22, 2020.

Alert Memorandum

During our site visits, we identified safety risks at the Ryan Federal Center and USGS Campus. The lightning protection system installed at the Ryan Federal Center created impalement hazards. In addition, the USGS Campus lacked rooftop fall protection. We issued an alert memorandum on October 27, 2020, requesting that PBS take necessary steps to enforce

contract compliance and protect individuals from these safety hazards.² *Figure 2* below shows the safety issues found.

**Figure 2 – Lightning Rods at Ryan Federal Center
and Rooftop With No Fall Protection at USGS Campus**



Photographs taken by the audit team, June 24, 2020.

In response to our alert memorandum, PBS provided technical comments stating that it was going to relocate the lightning rods at the Ryan Federal Center. However, PBS later determined that moving the rods could negatively affect fire protection capabilities. Therefore, PBS added stripes under the lightning rods and installed rod caps that mitigate the potential impalement. Because the impalement hazard was addressed by PBS, we consider it closed. However, the lack of fall protection at the USGS Campus remains open as PBS's response to the alert memorandum did not include specific actions to address the issue as discussed further in *Finding 2*.

² Alert Memorandum: Building Safety Concerns in PBS's Federal Aggregated Solar Procurement Pilot Contracts in Region 9 (Memorandum Number A201020-2).

Results

PBS's intent for the FASPP was to save money on energy costs by purchasing energy produced from PV panels installed at federal buildings at lower rates than those charged by the local utility companies. According to our calculations, between Fiscal Years (FYs) 2018 and 2020, PBS's FASPP saved the government over \$330,000 in energy costs.

However, we found that PBS could improve its site selection, administration, and oversight of the FASPP contracts. PBS's selection of two FASPP sites resulted in PBS paying more for electricity or not achieving expected energy savings. Furthermore, PBS's inadequate oversight of the FASPP contracts resulted in safety hazards, substandard energy production, violations of Buy American Act and Trade Agreements Act requirements, and lost opportunities to maximize energy savings.

Finding 1 – PBS selected two FASPP sites that resulted in added costs or lost savings.

PBS's intent for the FASPP was to save money on energy costs by purchasing energy produced from PV panels installed at federal buildings at lower rates than those charged by the local utility companies. However, we found that PBS selected two sites for its FASPP, the Carson City Federal Building and the USGS Campus, that resulted in higher electricity costs or lost energy savings.

Specifically, PBS selected the Carson City Federal Building even though the FASPP energy rate was higher than the rate charged by the local utility company. In addition, PBS selected and moved forward with the project at the USGS Campus even though it was being considered for disposal, resulting in potential contract termination costs of over \$1.5 million.

Carson City Federal Building

PBS selected the Carson City Federal Building even though the FASPP energy rate was higher than the local utility rates for electricity. Based on invoices from the local utility company for FYs 2018 to 2020, we found that PBS paid FASPP PPA rates that were 41 percent higher than the local utility rates. As a result, PBS paid \$22,694 more for energy at the Carson City Federal Building from April 21, 2018, to September 30, 2020.

In a technical support document, PBS estimated that the local utility company would charge \$0.074 per kWh, whereas the FASPP PPA rate would be 55 percent higher at \$0.115 per kWh. Further, the net present value calculations for the FASPP showed that PBS would lose over \$113,319 by including the Carson City Federal Building under the FASPP contract.

PBS's Deputy Regional Commissioner stated that the FASPP was not intended to reduce costs for every location, but to reduce costs on an aggregate. Similarly, PBS's Price Negotiation Memorandum indicated that PBS would allow for "some off-setting of costs between sites

belonging to the same agency (e.g., Nevada buildings can pay somewhat more than the local utility company if California sites demonstrate a compensating savings).” However, this approach is inconsistent with the primary objective stated in the FASPP solicitation that sites should have a FASPP PPA rate equal to or lower than local utility rates.

In the end, PBS’s selection of the Carson City Federal Building as a FASPP site resulted in higher energy costs and reduced the overall FASPP savings.

USGS Campus

PBS selected and moved forward with the FASPP project at the USGS Campus even though the USGS was planning to vacate the facility and had proposed the facility for disposal. As a result, the energy savings for the USGS Campus will be offset by termination costs that could exceed \$1.5 million.

In December 2015, when the FASPP contract was awarded, PBS included the USGS campus as one of the PV installation sites. However, in September 2016, less than 1 year after contract award, USGS indicated that it planned to vacate the facility.

Despite USGS’s intent to vacate the campus and the proposal to dispose of the building, PBS went forward with the installation of the PV system in May 2017. Now, PBS expects USGS to vacate the site by early FY 2024 and is preparing to dispose of the facility.

As a result, PBS will not only lose future energy savings from the project, but may also be subject to termination costs for removing the USGS Campus from the FASPP contract. PBS had projected that the USGS Campus project would save approximately \$1.8 million. However, PBS may only achieve about \$460,000 in savings by early FY 2024 when USGS vacates the campus. The remaining \$1.3 million of anticipated savings, which accounts for 31 percent of total FASPP savings, will be lost.

Further, under the FASPP contract, GSA may be liable for termination costs. According to the FASPP contract, the government has the right to terminate for its sole convenience. If the contract is terminated or the government does not exercise the 10-year option, the government is required to pay the contractor for work performed prior to the termination notice, plus “reasonable charges the Contractor can demonstrate to the satisfaction of the Government.” In total, GSA may be liable for over \$1.5 million related to removing the USGS Campus from the FASPP.

The selection of the Carson City Federal Building and the USGS Campus resulted in PBS not achieving its anticipated energy savings. Instead, the selection of these sites resulted in increased energy costs and potential losses due to early termination. To avoid these situations in the future, PBS should improve its process for selecting sites in the FASPP and other potential renewable projects to ensure that they will result in lower energy costs and achieve projected savings.

Finding 2 – PBS is not enforcing contract safety requirements and has not installed safeguards necessary to protect against the risk of serious injury or death.

As discussed in the *Background* section of this report, we issued an alert memorandum in October 2020 addressing safety concerns found at the USGS Campus and the Ryan Federal Center in California. PBS responded to our alert memorandum and addressed the safety issue at the Ryan Federal Center, but its response for the USGS Campus did not include specific corrective actions. In addition to the issues noted in our alert memorandum, we also found that PBS did not install ramps over exposed conduit at the Robert F. Peckham Federal Building (Peckham Federal Building), posing a tripping hazard to personnel.

Lack of Fall Protection at the USGS Campus

The USGS Campus is equipped with carport and roof-mounted PV panels. GSA contractors and employees routinely access the roof to provide required maintenance to the PV panels and other systems. However, during our site visit we noted that the roof lacked adequate fall protection, as required by Occupational Safety and Health Administration standards and PBS P100, *Facilities Standards for the Public Buildings Service*.

In response to our alert memorandum, PBS stated that it would emphasize the importance of fall protection for all roof-related maintenance work. However, PBS did not disclose the specific actions it planned to take to ensure compliance and safety.

PBS told us that it relied on its operations and maintenance contractor, Northern Management, to ensure Occupational Safety and Health Administration standards were followed by the FASPP contractor, NextEra. However, we confirmed that NextEra personnel did not follow these standards when inspecting and performing corrective maintenance on the PV panels at the USGS Campus.

Tripping Hazards at the Peckham Federal Building

We found that PBS has not installed ramps over exposed conduit on the roof of the Peckham Federal Building. The exposed conduit poses a tripping hazard to personnel working on the roof or maintaining the PV system.

As part of an agreement between Tesla and PBS, Tesla provided 11 conduit ramps to be installed at the USGS Campus, Ryan Federal Center, and Peckham Federal Building. PBS was responsible for installing the 11 ramps. During our site visits, we saw the ramps installed at the USGS Campus and Ryan Federal Center, but not at the Peckham Federal Building. As shown in *Figure 3*, the lack of conduit ramps poses a tripping hazard to personnel working on the roof or maintaining the PV system.

Figure 3 – Lack of Ramps Over Exposed Conduit at the Peckham Federal Building



Photographs taken by the audit team, June 25, 2020.

PBS personnel told us that ramps were not installed because they did not follow up with the operations and maintenance contractor. PBS anticipates that the contractor will install these ramps no later than September 30, 2021.

PBS should ensure the safety of personnel working on the roofs and maintaining the PV systems, as required. Although PBS has taken some action to address these safety hazards, it should complete its corrective actions to address the lack of fall protection at the USGS Campus and the tripping hazard at the Peckham Federal Building.

Finding 3 – PBS did not provide adequate oversight or administration of the FASPP sites, resulting in added costs and lost opportunities to maximize energy savings.

According to our calculations, the FASPP saved the government over \$330,000 in energy costs between FYs 2018 and 2020. However, PBS could have increased its savings significantly and avoided contract violations on the part of the solar energy contractors with better contract administration and oversight. We found that PBS did not enforce compliance with the FASPP contracts' requirements for minimum solar energy production, country of origin, and PV systems maintenance. PBS also did not take advantage of available opportunities related to solar storage batteries and use of solar renewable energy credits to increase savings. As a result, PBS incurred additional costs and lost opportunities to maximize energy savings.

Minimum Energy Production Requirements

PBS did not ensure that energy produced from PV panels met minimum energy production requirements in the FASPP contracts. We found that five of the six GSA sites under the FASPP did not meet minimum energy production requirements of the contract. As a result, solar energy contractors owe PBS nearly \$9,000 for the energy production shortfalls and reports for corrective action taken to avoid substandard energy performance.

FASPP contracts include minimum energy production requirements that vary according to the size of the system installed at each site. The minimum required amount of energy for each FASPP site's first year of production is noted in *Figure 1* on page 3 of this report. In addition, the FASPP contracts require solar energy contractors to compensate PBS if: (1) minimum production requirements are not achieved for 45 days and (2) the FASPP PPA rate is lower than

a fixed local utility rate. Lastly, if minimum production requirements are not met, the solar energy contractor is required to provide a report for corrective actions taken to address the substandard performance within 90 days from the end of the production year.

However, as shown in *Figure 4*, five of the six GSA sites under the FASPP did not meet the required minimum energy for production years 1 or 2, resulting in a refund due of nearly \$9,000.³ PBS agreed with our production calculations.

Figure 4 – Solar Energy Production Shortfalls and Refund Due Per Site

| Site | Production Year | Actual Production (kWh) | Required Minimum Production (kWh) | Fixed Local Utility Rate (\$/kWh) | FASPP PPA Rate (\$/kWh) | Refund Due |
|---|-----------------|-------------------------|-----------------------------------|-----------------------------------|-------------------------|-------------------|
| | | A | B | C | D | (B-A) x (C-D)* |
| Carson City Federal Building | 1 | 346,156.70 | 368,000.00 | \$0.0740 | \$0.1150 | \$0.00 |
| C. Clifton Young Federal Building | 2 | 505,945.80 | 536,727.42 | \$0.0767 | \$0.1210 | \$0.00 |
| Sacramento Federal Building - Cottage Way | 2 | 2,176,442.80 | 2,178,642.00 | \$0.1189 | \$0.1340 | \$0.00 |
| Ryan Federal Center | 2 | 772,265.70 | 863,910.00 | \$0.1026 | \$0.0970 | \$513.21 |
| USGS Campus | 2 | 930,861.20 | 1,077,405.00 | \$0.1620 | \$0.1050 | <u>\$8,353.00</u> |
| Total Refund Due | | | | | | \$8,866.21 |

*Calculated refund due is \$0 if fixed local utility rate is less than FASPP PPA rate.

PBS has not been enforcing these contract clauses because it is not monitoring the power produced from the PV panels. According to the FASPP program manager, monthly invoices from the solar energy contractor are compared to PV system production reports to ensure the invoices are accurate. However, PBS does not verify if the contractor is meeting the required minimum annual production by comparing solar energy production data from each site to the production requirements of the contracts. Furthermore, PBS lacks standard operating procedures to track solar energy production and enforce compliance with contract requirements for refunds from the contractor for production shortfalls.

³ The production year starts on the anniversary date of each site’s system start-up date. Due to varying construction schedules, each site has a different production year period.

To address these deficiencies, PBS should develop effective policies and procedures to: (1) ensure PV systems provide the required amount of energy and (2) enforce requirements for the solar energy contractor to remediate production issues and refund PBS for production shortfalls. Lastly, PBS should recover the refund due of nearly \$9,000 from NextEra.

Country of Origin

SolarCity violated the Buy American Act and Trade Agreements Act (BAA/TAA) requirements of the FASPP contracts. Furthermore, PBS could not support that it received the BAA/TAA noncompliance settlement amount of \$ [REDACTED] from SolarCity, and incurred \$7,000 of additional costs related to the BAA/TAA violations.⁴

Federal Acquisition Regulation 52.225-9, *Buy American-Construction Materials*, requires the solar energy contractor to use construction materials produced in the United States. In addition, Federal Acquisition Regulation 52.225-11, *Buy American-Construction Materials Under Trade Agreements*, allows contractors to purchase construction materials from a designated trade agreement country. Because both of these clauses were incorporated into the FASPP contract, the solar energy contractor was required to use only construction materials produced in the United States or a designated trade agreement country.

During the award process, the PBS contracting officer notified SolarCity of concerns over its ability to comply with the BAA/TAA requirements and requested that the contractor confirm full compliance with the requirements. SolarCity representatives responded in their final proposal that they “will be in full compliance with the Buy America [sic] and Trade Agreement [sic] Act with our performance on this solicitation.” The contracting officer accepted SolarCity’s proposal and awarded the contract on December 11, 2015.

However, on September 11, 2017, nearly 2 years after contract award, a U.S. Forest Service engineer found that the panels installed at the U.S. Forest Service - Pacific Southwest Region - Mare Island site were from a manufacturer that produces panels in China and Malaysia. Materials produced in China and Malaysia are not BAA/TAA-compliant.

The U.S. Forest Service contracting officer notified PBS of the BAA/TAA noncompliance issue. If not for this notification, PBS may not have identified the BAA/TAA compliance issues. According to the FASPP program manager, PBS relied on its construction management contractor to perform country of origin inspections. However, we did not find any specific BAA/TAA inspection requirements in the statement of work for the construction management contractor’s contract. Also, we reviewed weekly inspection reports by the construction management contractor and noted no BAA/TAA verifications before the U.S. Forest Service engineer discovered the issue on September 11, 2017. It is apparent that BAA/TAA compliance inspections were not performed despite PBS’s initial concern about SolarCity’s ability to comply with BAA/TAA requirements prior to contract award.

⁴ Redactions in this report represent proprietary and confidential business information.

SolarCity confirmed in November 2017 emails to the Assistant Regional Counsel that some panels and equipment installed at all FASPP sites, except the Peckham Federal Building, were produced in China and Malaysia and were not BAA/TAA compliant. The email included an action plan to ensure compliance for the remainder of the contract.

When the BAA/TAA compliance issues were identified, construction was completed or close to completion at all of the FASPP sites except for the Peckham Federal Building, where construction had yet to begin. To resolve the issue, PBS requested that the noncompliant parts be removed and replaced; reviewed SolarCity's internal audit, which listed all noncompliant materials that were already installed and impractical to replace; and negotiated a settlement amount for the noncompliant parts listed in that audit. The internal audit and related construction delays cost PBS \$7,000; however, the program manager told us PBS decided to not seek reimbursement for those costs as part of the settlement amount with SolarCity.

According to a July 20, 2018, memorandum signed by the PBS contracting officer, the settlement amount owed to the government was \$ [REDACTED], of which \$ [REDACTED] was owed to the U.S. Forest Service and \$ [REDACTED] to PBS. We verified that the U.S. Forest Service received its settlement amount; however, PBS could not support that it received its portion of the settlement.

Rather than receiving its settlement amount in a lump sum, PBS chose to have its payment applied to the new FASPP rate for the Sacramento Federal Building - Cottage Way (Cottage Way). The new per kWh rate covered change orders at Cottage Way for SolarCity to install a PV parking canopy system instead of the rooftop system that was awarded.⁵ Had PBS applied the BAA/TAA settlement amount of \$ [REDACTED] to the change orders, then the new per kWh rate should not have exceeded \$ [REDACTED]. However, on February 22, 2018, PBS awarded the new Cottage Way rate of \$ [REDACTED] per kWh, a [REDACTED] percent increase over the \$ [REDACTED] per kWh rate. Therefore, it appears that PBS did not apply the BAA/TAA settlement amount to change orders at Cottage Way, as was documented in the July 20, 2018, memorandum. See **Appendix B** for our evaluation of the new awarded Cottage Way rate.

The PBS Deputy Regional Commissioner told us that she believed the settlement was applied, but recognized that the documents provided do not make reference to the BAA/TAA credit, or its application to the Cottage Way change orders. PBS provided no additional documents to support its position that the settlement was applied.

PBS's ineffective contract administration and lack of oversight allowed these BAA/TAA violations to occur and did not ensure the BAA/TAA noncompliance settlement amount was applied. PBS should develop and implement procedures and controls for enforcing BAA/TAA

⁵ Because the FASPP PPA does not have PV system installation costs, PBS was to pay for the change orders with a higher FASPP PPA rate than the awarded \$ [REDACTED] per kWh.

compliance for sites added to the FASPP or for other future renewable energy projects. Also, PBS should ensure it receives the BAA/TAA noncompliance settlement amount of \$ [REDACTED]

Solar Storage Batteries

Solar storage batteries store energy produced from PV panels and discharge the energy as needed, reducing the demand for more expensive energy from the local utility company. Despite the potential savings provided by solar storage batteries, PBS has not asked the contractor to install these batteries at the Peckham Federal Building, resulting in lost savings. We estimate that PBS could save up to \$400,000 during the remaining life of the contract if it installs solar storage batteries at the Peckham Federal Building.

Solar storage batteries save on energy costs by reducing demand and consumption of energy from the local utility company. Local utility companies bill PBS for demand charges based on the most amount of energy provided during a 15-minute period each billing cycle. Solar storage batteries can reduce demand charges by discharging stored energy during high periods of use, typically between 2 p.m. to 5 p.m. In addition, solar storage batteries can reduce consumption charges by providing power when the sun is not out and the PV panels are not generating power, typically between 6 a.m. to 8 a.m.

PBS installed solar storage batteries at the USGS Campus and Ryan Federal Center to reduce energy costs paid to the local utility company. However, these two sites had significantly lower electricity rates charged by the local utility company compared to the Peckham Federal Building. As shown in *Figure 5* below, the invoiced rates for electricity from the local utility company at the Peckham Federal Building were up to 57 percent more than the other two sites with batteries installed.

Figure 5 – Actual Demand Rates for Peckham Federal Building and Two Battery-Installed FASPP Sites

| Demand Rate ⁶ | Peckham Federal Building Rates | Rates for the USGS Campus and Ryan Federal Center | Difference of Peckham to Other Sites | Percent Increase Peckham |
|--------------------------|--------------------------------|---|--------------------------------------|--------------------------|
| | A | B | C=A-B | D=C/B |
| Winter Max | \$20.55 | \$13.11 | \$7.44 | 57% |
| Summer Max | \$21.10 | \$16.16 | \$4.94 | 31% |

⁶ Demand rates are charged per kW by the local utility company during a 15-minute period with the most energy provided to the site during the billing cycle. These rates differ throughout the year. For example, in our invoices reviewed, Winter Max was effective on February 6, 2020, and Summer Max was effective on July 6, 2020.

In addition, as shown in *Figure 6*, solar storage batteries installed at the USGS Campus and Ryan Federal Center have provided significant savings and return on investment. For the USGS Campus alone, these batteries have resulted in projected annual savings of \$208,292 and a return on investment of 927 percent.

Figure 6 – Solar Storage Battery Savings and Return on Investment

| FASPP Site | Projected Annual Savings* | Annual Fixed Costs of Solar Storage Batteries | Return on Investment |
|---------------------|---------------------------|---|----------------------|
| | A | B | (A-B)/B |
| USGS Campus | \$208,292 | \$20,290 | 927% |
| Ryan Federal Center | \$50,820 | \$10,582 | 380% |
| Total | \$259,112 | \$30,872 | |

*Based on 3 months sampled (April 2019, July 2019, and February 2020)

We evaluated results from the NREL’s System Advisor Model tool (SAM) and savings from batteries installed at FASPP sites for potential savings at the Peckham Federal Building.⁷ Using SAM and assuming PBS awards the 10-year option, we estimate that PBS will pay \$10.22 million in energy costs without a solar storage battery installed. With batteries installed, we estimate PBS would pay \$9.78 million for energy, a savings of \$441,000 over the life of the contract, or \$24,525 annually. It is likely that the additional annual savings would cover the cost of the batteries and increase the savings for this site.

PBS officials could not explain why solar storage batteries were not considered for the FASPP site at the Peckham Federal Building, noting that the individuals who made these decisions are no longer with GSA. Nonetheless, a FEMP program manager who assisted PBS in the FASPP procurement confirmed that a solar storage battery system can operate effectively at the Peckham Federal Building FASPP site. In light of the benefits offered by these systems, PBS should assess whether solar storage batteries installed at the Peckham Federal Building would provide adequate payback, and then make an appropriate decision based on the findings.

Solar Renewable Energy Certificates

PBS has not managed the registration and tracking of solar renewable energy certificates (solar RECs), resulting in a loss of solar RECs that could have been worth up to \$4.3 million. Although PBS owns the solar RECs created under the FASPP contract, it has no system or procedures to register, track, monitor, or use solar RECs in order to maximize energy savings.

⁷ NREL’s SAM, a U.S. Department of Energy model, is a tool to identify the net present value of savings by entering different variables, including location and resource, system design, grid limits, lifetime and degradation, financial parameters, electrical rates, and electric load. We ran the model with and without batteries at the Peckham Federal Building FASPP site.

A REC is a market-based instrument that, if sold, can reduce the overall price of PV systems. Because there is no way to track where electricity received through the utility grid comes from or how it is generated, RECs provide a means for accounting, tracking, and assigning ownership to renewable electricity generation and use. These certificates differ from utility bill credits, which reduce a site’s energy bill from the local utility company for times when the PV system generates more power than used.

A REC is produced when a renewable energy source generates 1 megawatt-hour (mWh) of electricity and delivers it to the power grid.⁸ For example, if a solar power facility produces 5 mWh of electricity, the facility earns five solar RECs to either keep or sell. The Western Renewable Energy Generation Information System (WREGIS) creates and tracks RECs for renewable energy generated in California and 10 other states, as well as parts of Canada and Mexico. WREGIS provides RECs for renewable energy generated as far back as 90 days for those that have a registered account.

In accordance with the FASPP contract, PBS owns the solar RECs from power production generated by the FASPP PV systems. FASPP PV systems have been in operation since April 2018; however, PBS has never registered an account with WREGIS. Since the PVs became operational, prices for solar RECs ranged from \$5.50 to as much as \$425. Using the ceiling solar REC prices from FYs 2018 to 2020, we calculated that the certificates could have been worth up to \$4.3 million for the 11,174 mWh generated, as shown in *Figure 7*.

Figure 7 – Estimated Value of Potential GSA RECs from FYs 2018 to 2020

| FY | Annual FASPP Production (mWh) for All Sites | Solar REC Prices | | Solar REC’s Estimated Value | |
|--------------|---|------------------|----------|-----------------------------|-----------------------|
| | | Floor | Ceiling | Floor | Ceiling |
| | A | B | C | A x B | A x C |
| FY 2018 | 1,903 | \$5.50 | \$400.00 | \$10,466.50 | \$761,200.00 |
| FY 2019 | 4,506 | \$15.00 | \$350.00 | \$67,590.00 | \$1,577,100.00 |
| FY 2020 | <u>4,765</u> | \$7.50 | \$425.00 | <u>\$35,737.50</u> | <u>\$2,025,125.00</u> |
| Total | 11,174 | | | \$113,794.00 | \$4,363,425.00 |

PBS’s market research showed that it was aware of the financial benefits of RECs prior to award. However, PBS did not develop or implement procedures or controls to register, track, and manage RECs. Furthermore, the FASPP program manager stated that she was not aware of who was responsible for REC tracking.

PBS officials stated that it was not their intention to sell the RECs, but to report them toward meeting the renewable energy requirements of the Energy Policy Act of 2005. According to data provided by PBS’s Office of Facilities Management, Energy Division, renewable energy

⁸ Each mWh of energy is equivalent to 1,000 kWhs.

generated from the FASPP only contributed 0.0026 percent of GSA’s total renewable energy reported during FY 2019. Officials from this division also stated that they had assisted another renewable energy project in GSA’s Great Lakes Region in modifying its contract to convey ownership of its wind RECs to the renewable energy provider in exchange for lower energy prices.

PBS should perform a cost-benefit analysis and determine the best use of its solar RECs. In performing this analysis, PBS should consider renewable energy requirements, reduced renewable energy reported after the disposal of the USGS Campus, increased energy costs at the Carson City Federal Building, and PBS’s requirement under the CFR to purchase utilities that promote economy and efficiency.

PV Systems Maintenance

The PV systems at the Peckham Federal Building were not properly maintained. As a result, the performance of the PV systems was likely affected, limiting PBS’s cost savings.

Under its FASPP contract, NextEra is responsible for maintaining and operating the PV panels, including but not limited to cleaning the arrays, replacing broken or worn-out system components, and performing maintenance in accordance with the equipment manufacturer recommendations and the minimum performance standards established through this procurement. NextEra told us that during its scheduled preventive maintenance visits, technicians inspect the sites for corrosion on the outside of enclosures and the racking system; defects on the racking system, such as rust, corrosion, or sagging; and general cleanliness throughout the site.

However, during our onsite field visit to the Peckham Federal Building on June 25, 2020, we found that a majority of the PV panels were soiled and several sections of the racking system were bent.⁹ See *Figure 8* for examples.

Figure 8 – Soiled Panels and Bent Racking System at the Peckham Federal Building



Photographs taken by the audit team, June 25, 2020.

Unclean panels and a bent racking system can reduce the effectiveness of a PV system. Using the NREL’s SAM, we found that if the panels at the Peckham Federal Building are soiled by 10

⁹ A racking system is used to attach PV panels to various surfaces, such as roofs, carports, or the ground.

percent, PBS can lose nearly \$2,000 of energy savings per year, or \$36,000 for the life of the contract. The need to ensure a well-maintained, clean PV system is confirmed by Tesla's operations and maintenance guide, which states that frequent washing and cleanliness of the panels can have a dramatic impact on the overall production of the system.

When we asked PBS about these issues, they stated that NextEra is responsible for the maintenance of the equipment since it is the contractor's equipment. Although we agree that the maintenance responsibility falls on NextEra, PBS is required to monitor the contract performance. However, PBS did not ensure that this contract requirement was met. As a result, PBS was unaware of the condition of the system and did not take any actions to address these issues.¹⁰

Likewise, the NextEra personnel we interviewed claimed that they perform offsite monitoring of the performance of the equipment and panels, and conduct annual onsite maintenance of the equipment. However, when we requested support for their annual maintenance inspections, they only provided a schedule showing the onsite work they had performed from March 2019 to August 2020. The schedule showed seven onsite visits during this period—to either install equipment or troubleshoot a piece of existing equipment—but no visit to perform the annual maintenance inspection. We could not confirm that any maintenance was actually performed.

NextEra's lack of maintenance and inspection resulted in soiled panels and a bent racking system, impairing the ability of the system to fully maximize its capacity. Accordingly, PBS needs to strengthen its oversight of the contract administration and ensure that contractors adhere to the maintenance requirements as outlined in the contract.

In sum, PBS did not enforce compliance with the FASPP contracts' requirements for minimum solar energy production, country of origin, and PV systems maintenance. PBS also did not take advantage of available opportunities related to solar storage batteries and use of solar RECs to increase savings. To address these deficiencies, PBS should implement controls to ensure the solar energy contractors comply with minimum energy production requirements, BAA/TAA requirements, and maintenance requirements. In addition, PBS should work with its Office of Facilities Management, Energy Division; and the U.S. Department of Energy to evaluate: (1) installing a solar battery storage system at the Peckham Federal Building and (2) the most economical and appropriate use of solar RECs.

¹⁰ We identified similar concerns over lack of maintenance and inspection records for PV systems in our *Audit of Public Buildings Services Photovoltaic Installations in the New England and Northeast and Caribbean Regions* (Report Number A170056/P/2/R20003, March 27, 2020).

Conclusion

According to our calculations, between FYs 2018 and 2020, the FASPP saved the government over \$330,000 in energy costs. However, we found that PBS could improve its site selection, administration, and oversight of the FASPP contracts. PBS's selection of two FASPP sites resulted in PBS paying more for electricity or not achieving expected energy savings. Furthermore, PBS's inadequate oversight of FASPP contracts resulted in safety hazards, substandard energy production, violations of the BAA/TAA requirements, and lost opportunities to maximize energy savings.

To address these deficiencies, PBS should take corrective actions to ensure that future potential FASPP sites and other renewable energy projects are appropriately selected and current sites are adequately maintained and operated. In addition, PBS should implement controls to ensure all contract requirements are followed and consider opportunities for potential added savings related to the use of solar storage batteries and appropriate use of solar RECs.

Recommendations

We recommend that the PBS Regional Commissioner for the Pacific Rim Region:

1. Identify methods, if any, to mitigate overpaying for energy at the Carson City Federal Building.
2. Determine the most cost-effective approach for removing the U.S. Geological Survey Menlo Park Campus from the FASPP during the disposition process of the campus.
3. Ensure PBS selects future sites for renewable energy projects with solar energy rates that are less than local utility rates and that can achieve the expected savings for the life of the project.
4. Address the lack of fall protection at the U.S. Geological Survey Menlo Park Campus described in our alert memorandum and install ramps over conduit at the Robert F. Peckham Federal Building.
5. Implement controls to ensure the solar energy contractor complies with contract requirements for minimum solar energy production and remediation for insufficient power production.
6. Recover the \$8,866 due from NextEra for not meeting the minimum energy production requirements for the U.S. Geological Survey Menlo Park Campus and Leo J. Ryan Federal Records Center during the second performance year.

7. Recover the \$ [REDACTED] due from Tesla for its noncompliance with the Buy American Act and Trade Agreements Act.
8. Implement controls to ensure compliance with the Buy American Act and Trade Agreements Act requirements for all FASPP projects going forward.
9. Collaborate with the U.S. Department of Energy to perform a feasibility study for installing a solar battery storage system at the Robert F. Peckham Federal Building, and install the system, if appropriate.
10. Coordinate with PBS's Office of Facilities Management, Energy Division, to evaluate and implement the most economical and appropriate use of the solar renewable energy certificates, including considering granting ownership to the solar energy contractor in exchange for lower electricity rates.
11. Ensure the solar energy contractor consistently maintains and washes the solar panels and repairs the bent racking system at the Robert F. Federal Peckham Building.
12. Ensure that the provisions of the contract are adhered to and deliverables met, especially in the area of maintenance by the solar energy contractor.

GSA Comments

In his response to our draft report, the PBS Regional Commissioner for the Pacific Rim Region stated that he agreed with our recommendations; however, his detailed response indicated that PBS did not completely agree with recommendations 7 and 10. For the reasons provided below, we reaffirm these recommendations.

- **Recommendation 7:** PBS asserted that proper contract documentation “would have shown” that it recovered the \$ [REDACTED] settlement to address Tesla’s noncompliance with the Buy American Act and Trade Agreements Act. In doing so, PBS acknowledges that it has no proof that it collected the settlement from Tesla.

Notwithstanding this acknowledgement, PBS asserts that “it is not in a position to renegotiate” with Tesla to recover the settlement amount because:

[T]he credit for Tesla’s non-compliance was recovered and applied to costs associated with the Cottage Way Campus in Sacramento, CA, as described in [Contract Modifications PS05 and PA08.]

However, nothing in Contract Modifications PS05 and PA08 supports that the settlement was applied to the rates for the Cottage Way Campus. Moreover, as detailed

in **Appendix B**, our calculations clearly demonstrate that PBS did not apply the settlement to these rates.

PBS also asserts that it “believes the long-term savings received from this contract provide greater benefit” than collecting the settlement. However, this assertion is irrelevant. The anticipated savings neither absolve Tesla of its obligation to pay the settlement arising from its noncompliance nor free PBS of its responsibility to recover the settlement.

Based on the above, we maintain our recommendation that PBS should recover the \$ [REDACTED] due from Tesla for its noncompliance with the Buy American Act and Trade Agreements Act.

- **Recommendation 10:** PBS agreed that it will coordinate with the Office of Facilities Management, Energy Division, to evaluate and implement the most economical and appropriate use of the solar renewable energy certificates. However, with respect to our recommendation that PBS should consider granting ownership of these certificates to the solar energy contractor in exchange for lower electricity rates, PBS stated that it has determined that GSA should retain these certificates. According to PBS’s response, GSA claims these certificates toward meeting the Energy Policy Act’s requirement that agencies generate at least 7.5 percent of their energy through renewable sources.

We support GSA’s efforts to comply with the Energy Policy Act’s requirements; however, the FASPP only contributed 0.0026 percent of GSA’s total renewable energy reported during FY 2019. In exchange for this immaterial contribution to GSA’s overall energy goal, PBS is potentially forgoing up to \$4.3 million for the 11,174 mWh generated through the FASPP from FYs 2018 through 2020. Accordingly, we encourage management to carefully reconsider its position before making a final decision on the sale or transfer of renewable energy certificates.

PBS’s response can be found in its entirety in **Appendix C**.

Audit Team

This audit was managed out of the Pacific Rim Region Audit Office, with assistance from the Greater Southwest Region Audit Office, and conducted by the individuals listed below:

| | |
|-------------------------|---|
| Hilda M. Garcia | Regional Inspector General for Auditing |
| Eric Madariaga | Audit Manager |
| Hector Molina-Rodriguez | Auditor-In-Charge |
| Lily Mirsepassi | Auditor |
| Joseph Eom | Auditor |

Appendix A – Scope and Methodology

This audit assessed the PBS Pacific Rim Region’s selection of FASPP sites, and its oversight and management of the FASPP. Our scope consisted of six of the seven FASPP sites located in Nevada and California that are owned by GSA. However, between June 23 and 25, 2020, we conducted site visits to all five FASPP sites in California. This included four GSA sites and a U.S. Forest Service site.

To accomplish our objective, we:

- Reviewed FASPP contract files and supporting documentation, including potential site assessments, solicitation, offers evaluation, independent government estimate, technical evaluations, net present value determinations, award determination, and contract modifications;
- Reviewed solar energy production reports from PBS and the solar energy contractor to determine solar energy production for production years 1 and 2, and retrieved information from Tesla’s production database;
- Reviewed solar energy and utility company invoices to validate solar energy production, detect any overbillings, and determine utility companies’ electricity rates;
- Compared actual PV production per site for production years 1 and 2 to contract requirements to determine compliance;
- Conducted site visits to five FASPP locations in California, interviewed building managers and building personnel, took pictures, and inspected the PV systems and the surrounding areas;
- Reviewed emails, memorandums, and other documentation related to noncompliance with BAA/TAA contract requirements and the settlement credit;
- Evaluated PBS’s FASPP site selection determinations, placing emphasis on its justifications for selecting the Nevada sites;
- Interviewed PBS Pacific Rim Region officials involved with FASPP, including the legal counsel, contracting officer, contracting officer’s representative, and Deputy Regional Commissioner;
- Interviewed U.S. Environmental Protection Agency and U.S. Department of Energy officials who assisted PBS during FASPP’s solicitation and award process;
- Communicated with PBS’s Office of Facilities Management, Energy Division, in PBS Central Office to discuss its role in buying RECs and reporting compliance with the Energy Policy Act of 2005;
- Reviewed relevant safety and renewable energy requirements, policies, and regulations including: 40 U.S.C. 501, 41 CFR 102-82, 29 CFR 1910.28, 29 CFR 1910.29, the Energy Policy Act of 2005, Executive Orders 13693 and 13834, PBS P100, and Section 5(a)(1) of the Occupational Safety and Health Act of 1970;
- Evaluated PBS’s determinations to add solar energy storage batteries at two FASPP sites and analyzed whether other sites could benefit from the addition of storage batteries;

- Reviewed the WREGIS website for relevant REC reporting requirements and usage;
- Analyzed and calculated solar REC potential savings based on NREL Quarterly Solar Industry Updates to determine average solar REC price valuation based on regional average prices from FYs 2018 to 2020; and
- Reviewed FASPP contract requirements and conducted interviews with PBS officials and Tesla and NextEra representatives to assess the design, implementation, and operating effectiveness of internal controls in relation to the audit objective. This included evaluating and documenting any lack of internal controls and internal control deficiencies.

We conducted the audit between April 2020 and February 2021 in accordance with generally accepted government auditing standards, except for specific applicable requirements that were not followed as described in the paragraph below. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

Subsequent to the completion of our fieldwork, we determined that an auditor on the team did not obtain the number of continuing professional education credits (CPEs) required under generally accepted government auditing standards. Although the auditor met the prescribed minimum of 20 CPEs in each year of the FY 2019 and FY 2020 training cycles, the auditor did not obtain the full 80 CPEs over the same time period as required. Because the auditor was properly supervised throughout the course of the audit, we concluded that the auditor's inadequate CPE levels did not adversely affect their audit work or the findings and conclusions reached by the audit team.

Internal Controls

We assessed internal controls significant within the context of our audit objective against GAO-14-704G, *Standards for Internal Control in the Federal Government*. The methodology above describes the scope of our assessment and the report findings include any internal control deficiencies we identified. Our assessment is not intended to provide assurance on GSA's internal control structure as a whole. GSA management is responsible for establishing and maintaining internal controls.

Appendix B – BAA/TAA Settlement and Cottage Way Change Orders

SolarCity proposed increasing the Cottage Way rate by █ percent from \$ █ per kWh to \$ █ per kWh to cover Cottage Way’s initial change order costs of \$ █. As shown in the table below, these change order costs would have increased the capital costs at Cottage Way by █ percent, from \$ █ to \$ █. In a memorandum dated December 21, 2017, PBS compared the capital cost increase of █ percent to the proposed rate increase of █ percent, and found the proposal to be unsupported.

PBS’s Evaluation of Proposed Cottage Way FASPP PPA Rate

| Description | Original | Proposed | Percent Change |
|--|----------|----------|----------------|
| Proposed Capital Increase of Change Orders | \$ █ | \$ █ | █ |
| Proposed Cottage Way FASPP PPA Rate | \$ █ | \$ █ | █ |

Documentation provided by PBS shows that the proposed change order costs were reduced from \$ █ to \$ █ which PBS accepted as the final change order amount. According to a July 20, 2018, memorandum by the contracting officer, the BAA/TAA settlement amount was to be applied to this final change order amount. Using PBS’s methodology to evaluate SolarCity’s proposal and applying the \$ █ BAA/TAA settlement amount to the final change order amount, the new Cottage Way per kWh rate should not have exceeded \$ █ as shown below.

Maximum Cottage Way FASPP PPA Rate

| Description | Amount |
|---|--------|
| (A) Final Change Order Amount | █ |
| (B) Remaining BAA/TAA Settlement Amount | █ |
| (C) Final Change Order Amount Net of BAA/TAA Settlement (A-B) | █ |
| (D) Percent Increase of (C) Over Capital Costs (C/\$ █) | █ |
| Maximum Cottage Way FASPP PPA Rate (1+D) x (\$ █) | █ |

However, PBS awarded the new Cottage Way rate of \$ █ per kWh, a █ percent increase from the original \$ █ per kWh rate. This increase is double the increase in capital costs from the change orders and exceeds the maximum \$ █ rate had PBS applied its BAA/TAA settlement amount. Therefore, it appears that PBS did not apply the BAA/TAA settlement amount to change orders at Cottage Way as was documented in the July 20, 2018, memorandum.

Appendix C – GSA Comments


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U.S. General Services Administration
Public Buildings Service

September 09, 2021

MEMORANDUM FOR: HILDA M. GARCIA
REGIONAL INSPECTOR GENERAL FOR AUDITING
PACIFIC RIM REGION (JA-9)

THROUGH: NINA M. ALBERT
COMMISSIONER 
PUBLIC BUILDINGS SERVICE (P)

FROM: DAN R. BROWN 
REGIONAL COMMISSIONER
PUBLIC BUILDINGS SERVICE
PACIFIC RIM REGION (9P)

SUBJECT: Response to the Office of Inspector General's Draft Audit Report,
*Opportunities for PBS to Improve Management and Oversight of
Its Federal Aggregated Solar Procurement Pilot Contracts* (Report
Number A201020)

The Public Buildings Service (PBS) thanks the Office of the Inspector General (OIG) for the opportunity to review and comment on the subject audit report. PBS thanks OIG for acknowledging the more than \$300,000 in energy savings, a benefit to the American taxpayers, that Federal Aggregated Solar Procurement Pilot (FASPP) contracts offer. PBS agrees with the OIG's recommendations and provides the following responses to those recommendations:

1. PBS agrees to identify methods, if any, to mitigate overpaying for energy at the Carson City Federal Building.
2. PBS agrees, and is currently in the process of determining, the most cost-effective approach for removing the U.S. Geological Survey Menlo Park Campus from FASPP during the disposition process of the campus.
3. PBS agrees and will ensure it selects future sites for renewable energy projects with solar energy rates that are less than local utility rates and that can achieve the expected savings for the life of the project.
4. PBS previously addressed the lack of fall protection at the U.S. Geological Survey Menlo Park Campus described in OIG's alert memorandum and will install ramps over conduit at the Robert F. Peckham Federal Building no later than September 2021.
5. PBS agrees to implement controls to ensure the solar energy contractor complies with contract requirements for minimum solar energy production and remediation for insufficient

General Services Administration
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Appendix C – GSA Comments (cont.)

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power production.

6. PBS agrees to recover the \$8,866 due from NextEra for the second performance year failure to meet the minimum energy production requirements for the U.S. Geological Survey Menlo Park Campus and Leo J. Ryan Federal Records Center. PBS has recovered the energy generation shortfall through a Guaranteed Energy Production analysis in the first year for both locations through utility bill credits and will use that process for the second year when the analysis is complete.

7. PBS agrees with the OIG and believes that maintaining proper contract files is necessary and would have shown that the non-compliance was addressed via contract modifications. PBS will ensure that adequate contract files are maintained as part of any future power purchase agreement (PPA). However, PBS does not believe that it is in the position to renegotiate. The credit for Tesla's non-compliance was recovered and applied to costs associated with the Cottage Way Campus in Sacramento, CA, as described in bilateral agreements, Contract GS-09-P-16-KS-C-7026 Modification PS05, page 3, and Contract GS-09-P-16-KS-C-7026 Modification PA08. Furthermore, PBS believes the long-term savings received from this contract provide greater benefit.

8. PBS agrees to implement controls to ensure compliance with the Buy American Act and Trade Agreements Act requirements for all FASPP projects going forward.

9. PBS agrees to continue to collaborate with the U.S. Department of Energy to evaluate installation of solar battery storage systems at all locations, if appropriate. However, batteries were considered at Peckham and determined not to be feasible due to space constraints.

10. PBS agrees that PBS Region 9 will coordinate with PBS's Office of Facilities Management (OFM), Energy Division, to evaluate and implement the most economical and appropriate use of the solar renewable energy certificates (RECs) for controls to register, manage, and track RECs. In addition, in coordination with OFM, PBS Region 9 has determined that GSA should retain RECs as part of the Agency's sustainability priorities. The proposal to sell or grant ownership of RECs to the solar energy contractor in exchange for lower electricity rates is not recommended as it would reduce our ability to claim RECs toward energy targets under the Energy Policy Act of 2005 requirement for agencies to achieve at least 7.5% renewable energy generation.

11. PBS agrees to ensure the solar energy contractor consistently maintains and washes the solar panels and repairs the bent racking system at the Robert F. Federal Peckham Building.

12. PBS agrees to ensure that the provisions of the contract are adhered to and deliverables met, especially in the area of maintenance by the solar energy contractor.

The first FASPP projects provided benefits in avoiding capital construction costs, saving energy and increasing PBS expertise in PPA contracting. As a pilot, PBS can always improve. We agree with the recommendations as explained above and will establish and implement internal controls to ensure personnel responsible for the award and administration of the contracts understand their responsibilities with regards to these recommendations.

If you have any questions, please contact Patricia Chang-Lynn, Deputy Regional Commissioner, Pacific Rim Region at (415) 722-3890.

Appendix D – Report Distribution

GSA Administrator (A)

GSA Deputy Administrator (AD)

Commissioner (P)

Deputy Commissioner (PD)

Chief of Staff (PB)

Deputy Chief of Staff (PB)

Assistant Commissioner for Strategy and Engagement (PS)

Regional Commissioner (9P)

Chief Financial Officer (B)

Office of Audit Management and Accountability (BA)

Assistant Inspector General for Auditing (JA)

Director, Audit Planning, Policy, and Operations Staff (JAO)