




U.S. GENERAL SERVICES ADMINISTRATION
Office of Inspector General

Field Audit Office, Pacific Rim Region (JA-9)
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June 29, 2011

MEMORANDUM FOR JEFFREY E. NEELY
 REGIONAL COMMISSIONER, PBS
 PACIFIC RIM REGION (9P)

FROM: JAMES P. HAYES 

 REGIONAL INSPECTOR GENERAL FOR AUDITING
 PACIFIC RIM REGION (JA-9)

SUBJECT: Audit Memorandum: Procurement of the Roof-mounted
 Photovoltaic System for the Chet Holifield Federal Building
 Laguna Niguel, California
 Assignment Number A090184-24

As part of our oversight of projects funded by the American Reinvestment and Recovery Act of 2009 (Recovery Act)¹ we noted several issues related to the installation of a photovoltaic system² at the Chet Holifield Federal Building in Laguna Niguel, California which we believe warrant your attention. Specifically, (1) the Independent Government Estimate (IGE) was not properly developed; (2) bidding may have been unduly

¹ The Recovery Act authorized the General Services Administration (GSA) \$5.55 billion for the Federal Buildings Fund, of which \$933 million were to be used for limited scope projects. Limited scope projects are defined as non-capital projects (i.e. not new construction or major space renovations), and include such categories as systems (HVAC and controls), renewable (mostly photovoltaic and solar domestic hot water), retro-commissioning, water conservation, and lighting. Of the \$933 million, \$92 million was distributed to 14 selected buildings in the Pacific Rim Region. The GSA Office of Inspector General (OIG) is conducting oversight of the projects funded by the Recovery Act. The objective of the award phase is to determine if the solicitation, source selection, evaluation of the proposals, and the contract award were accomplished in accordance with prescribed criteria and Recovery Act mandates.

² The system converts solar energy into electricity. The project was awarded on April 6, 2010, to Independent Energy Solutions, Inc. at a firm-fixed price of \$4,079,963.

influenced by the narrowly defined price range cited in the solicitation; and, (3) the acquisition plan did not have a budget estimate nor did it cite a specific period of performance.

On March 24, 2011, the Regional Commissioner responded to our draft memorandum. The complete response is provided as an attachment. Additionally, a synopsis of Public Building Services' (PBS') comments and our response is provided in this report.

Finding 1 - IGE Not Properly Developed

The IGE was not developed in accordance with Federal Acquisition Regulation (FAR) and General Services Acquisition Manual (GSAM) requirements.

The primary purposes of an IGE are to help formulate a project's budget and determine price reasonableness. Therefore, to be of value, it should be prepared as part of the project planning process. In this case, it was developed after the budget was formulated, the solicitation issued, and the proposals received.

In addition, the IGE was not developed using independent analyses; instead, it appears the costs were "backed-into" to agree with the budget. In essence, the IGE was created primarily to fulfill a documentation requirement.

The budget for the subject project was developed as early as May 2009; the solicitation was issued January 29, 2010; and the winning bid was received on March 1, 2010, the same date on which the IGE was prepared. Effectively, this made the IGE of little use; and the process was contradictory to FAR 36.203, which states the IGE should be prepared and furnished to the contracting officer at the earliest practicable date.

GSA personnel contended the IGE for this project, and of many of the Recovery Act projects, was not intended to formulate the budget. According to the GSA analyst who prepared the IGE, an IGE is usually developed by identifying and pricing the equipment/service needed prior to approval of the budget. The analyst indicated that, for most Recovery Act projects, a budget is already in place at inception, making the IGE unnecessary.

The analyst further stated that because there was competitive bidding, the IGE was not used to determine fair and reasonable pricing. The sole reason an IGE was prepared was to "document the file."

In addition, there was no documented basis for the IGE. It appears the figures used were "backed-into" to match the budget. Presented below are the budget amount and the IGE:

Budget Amount: \$4,092,000

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IGE Amount: 740 kilowatts X \$5,500 per kilowatt = \$4,070,000

According to the analyst, the kilowatt (kw) capacity and unit price were based on knowledge and experience from prior work, but he was unable to provide back-up for these figures. While the winning bid was reasonably close to the total IGE, the units that made up the bid were significantly different (908 kw x \$4,493 per kw). In fact, the average kilowatt capacity and unit price for the 10 submitted proposals were 829 kw and \$4,807 per kw, respectively.

The IGE for this project was not properly developed. GSAM 536.203 states the IGE should be developed before receipt of the proposals. FAR 36.203 requires that an IGE be prepared in as much detail as possible and developed as though the Government were competing for the award. Also, FAR 36.214 requires the contracting officer to evaluate proposals and compare them to the IGE.

MANAGEMENT COMMENTS

PBS concurred that a budgetary estimate should have been kept on file to support the budget request. However, PBS disagreed with our statement that “there was no documented basis” and responded that, because of the extent of competition, the IGE was not needed as a basis for determining price reasonableness.

OFFICE OF INSPECTOR GENERAL’S RESPONSE

Although construction contracts are subject to other parts of the FAR, FAR Part 36 prescribes the procedures specific to construction contracting, and takes precedence over other parts of the regulation if the acquisition of construction is involved.

FAR 36 explicitly states “the estimate shall be prepared in as much detail as though the Government was competing for the award.” Therefore, we believe a detailed estimate was required, rather than a parametric estimate.

FAR 36 also states that the IGE “shall be prepared and furnished to the contracting officer at the earliest practicable time.” Further, FAR 36 states that while evaluating proposals for negotiation of construction contracts, the contracting officer “shall compare them to the Government estimate.” It is evident that the FAR directs (1) the Government estimate be the tool to determine if the results of the competition are reasonable, and (2) the contracting officer to compare the proposals to the Government estimate.

Finding 2 - Price Range Narrower than Prescribed by FAR

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GSA may not have received optimum pricing for the project because the price range cited in the solicitation was overly restrictive. The price range was set at between \$3,750,000 and \$4,092,000 (the project budget). The solicitation further stipulated offers exceeding the maximum amount would not be evaluated. As a result, the bids were nearly identical with little deviation. Of the 10 bids received, 9 fell within this range. Seven bids were over \$4 million; five contractors bid \$4.092 million (the maximum). The winning bid was \$4.08 million.

Specifying the price range in this manner did not follow the recommendation of FAR, Subpart 36.204, which established the estimated price ranges as follows:

- Less than \$25,000
- Between \$25,000 and \$100,000
- Between \$100,000 and \$250,000
- Between \$250,000 and \$500,000
- Between \$500,000 and \$1,000,000
- Between \$1,000,000 and \$5,000,000
- Between \$5,000,000 and \$10,000,000
- More than \$10,000,000

The PBS analyst who developed the solicitation stated he considered the FAR language to be a recommendation not a requirement. He also said that he chose not to follow FAR in this instance because PBS wanted to ensure that all funds set aside for this project were used. Because this was a scalable project³, PBS wanted the contractors to offer the highest kilowatt capacity for the given budget, indicating that using the FAR-stipulated price ranges may not have led to bids that would have achieved GSA's desired results. In addition, GSA could not accept any bid exceeding the maximum price (budget) because it could not be funded.

We disagree with the assumption that a wider price range would have resulted in bids not meeting GSA's desired results. Although there is a potential link between the system's capacity and its price, the solicitation did not stipulate all the necessary specifications for the system. In part, this goes back to PBS not performing an independent analysis in developing the IGE. If this had been done, contractors could have bid using specifications rather than the project budget as the guiding factor in

³ Scalability refers to increasing the resources to a single system. The PV roofing is a scalable project because the contractors could add more kilowatt capacity for a given space.

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preparing their bids. The solicitation required the system have a minimum capacity of 600 kw, with bids evaluated based on net present value (NPV)⁴ rather than bid price alone.

The bidders offered capacities ranging from 700 kw to 1,000 kw; the winning contractor offered 908 kw. Nevertheless, without government estimates to use as a gauge, there was no way to determine if this much capacity was needed, or if a lower capacity would have sufficed.

It is possible that a wider price range could have resulted in lower bids for systems with lesser (but acceptable) kilowatt capacity. This matter is significant because PBS was not required to spend the entire budget on this project. According to PBS personnel, unused funds could have been reallocated to another project within a building or returned to Central Office for other Recovery Act projects.

MANAGEMENT COMMENTS

PBS disagreed with our comments on the use of price ranges stipulated in the FAR, indicating the regulation was a recommendation and not a requirement. Further, PBS stated that the range used in the solicitation was in line with commercial practices, and therefore, appropriate to deviate from the FAR 36 table. Finally, PBS stated that the OIG did not fully understand how net present value worked; and, as a result, misrepresented the results of the price evaluation.

OFFICE OF INSPECTOR GENERAL'S RESPONSE

We agree that our memorandum could have been more explicit in stating the price range as a recommendation. Although we noted PBS' position (see paragraph 3 on page 4), we have revised the audit memorandum to identify the range as a recommendation.

While we agree that the price range is a recommendation, we question PBS' use of the narrow price range and their assessment that stipulating the project budget was in line with commercial practices. Again, we cite FAR 36 for construction contracting. The regulation is clear that when disclosing the project magnitude in the solicitation, "in no event shall the statement of magnitude disclose the Government estimate." In this procurement, PBS disclosed the project budget prior to entering negotiations.

⁴ NPV is defined as the difference between the present value of cash inflows and the present value of cash outflows. In this case, the NPV evaluation included kilowatt capacity and the baseline cost.

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The net present value as an evaluation factor is not relevant here because FAR 36 does not address the issue of the Government's choice of evaluation factors. In addition, we do not take exception to the use of this evaluation method. Rather, project magnitude is defined in this clause as either the physical characteristics of the project, or the estimated price range of the project. The dollar range of the project magnitude is expressed as "price", which we believe to be reasonably defined as the actual price paid the contractor at time of award, not the evaluation factor. The project magnitude clause in FAR 36.204 cites the range is to be expressed as a "price range," not an internally generated number. We disagree that the selection of any type of evaluation method somehow negates the requirement of the FAR project magnitude requirement.

Acquisition Plan Missing Elements

The acquisition plan was missing two key components required by FAR 7.105, an estimate of the cost and the performance period of the project. According to a PBS representative, the information was not available at the time of the acquisition plan development.

GSA posted the project solicitation on the Federal Business Opportunities website on January 29, 2010. The acquisition plan was developed on January 28, 2010, signed on January 30, 2010, and contained many of the key provisions, including the statement of need, applicable conditions, trade-offs, risks, plan of action, competition, and acquisition considerations. However, it was missing the budget estimate and period of performance, two components explicitly required in the FAR.

PBS representatives indicated that Recovery Act projects are unique in that a budget amount is predetermined, making an estimate unnecessary. Also, according to PBS officials, the period of performance was not known at the time of the award. They indicated that information would not be known until after project award and issuance of the Notice to Proceed.

As we concluded above, an estimate prepared at the start of the planning stage would have provided PBS with a basis for evaluating the price proposals.

As to the period of performance, the plan could have included language similar to other Region 9 Recovery Act contracts. These contracts state that: "The Contractor shall achieve substantial completion of work, as that term is defined in the Agreement, no later than one year from issuance of Notice to Proceed."⁵ Even without a specific date,

⁵ For the Laguna Niguel project, PBS issued the Notice to Proceed on October 6, 2010, requiring work to be completed no later than 365 days from issuance of the NTP.

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this statement provides approximate start and end dates for the project; a control measure that could help avoid delays.

The GSA internal group responsible for reviewing all Recovery Act acquisition plans⁶ reached the same conclusion. In an email dated February 8, 2010, the Office of the Chief Acquisition Officer informed the project's contracting officer that the acquisition plan was missing these two significant elements.

MANAGEMENT COMMENTS

PBS agreed that costs, along with the NPV methodology, should have been discussed more fully; and that it would have been better to state an anticipated period of performance in the acquisition plan. However, PBS indicated the FAR does not require the plan include an IGE, but only a discussion of costs that were discussed in the plan. Regarding the period of performance, PBS claimed the solicitation and subsequent contract included the schedule requirements, and the omission of the statement from the acquisition plan had no material impact.

OFFICE OF INSPECTOR GENERAL'S RESPONSE

While we agree the word "estimate" is not used in the referenced FAR clause, the section does state the plan should "set forth the established cost goals for the acquisition," which would reasonably include a discussion of the estimate. This is validated through PBS' internal guidance on the preparation of acquisition plans, the PBS Acquisition Planning Wizard, version 3.0, Comprehensive Sample. The section on costs, which gives directions on completing the acquisition plan, includes the following: "discuss cost concepts used to determine the estimates. Identify how you plan to develop the IGCE, what methodology was used."

We agree the schedule requirement is explicitly stated in the solicitation and the subsequent contract; however, FAR 7.105 states the acquisition plan needs to include the period of performance. PBS' internal guidance supports our conclusion by stating that delivery is an essential element of an order, and that the plan must explain the reason for establishing the period of performance.

If you have any questions or desire any additional information, please contact Joe Eom, Auditor-in-Charge, at (415) 522-2731, or James Draxler, Audit Manager, at (415) 522-2734

⁶ On July 22, 2009, a memo was sent to all PBS contracting officers from the Office of the Chief Acquisition Officer of its intent to review all Recovery Act acquisition plans and provide feedback as needed.

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GSA Pacific Rim Region

March 24, 2011

MEMORANDUM FOR JAMES P. HAYES
REGIONAL INSPECTOR GENERAL FOR AUDITING
PACIFIC RIM REGION (JA-9)

FROM: *Jeffrey B. Neely*
JEFFREY B. NEELY
REGIONAL COMMISSIONER, PBS
PACIFIC RIM REGION (9P)

SUBJECT: Response to Draft Audit Memorandum:
Procurement of the Roof-mounted
Photovoltaic System for the Chet
Holifield Federal Building, Laguna
Niguel, California
Assignment Number A090184-24

We agree in part, and disagree in part, with the referenced draft audit memorandum.

Finding: IGE Not Properly Developed

We agree that a budgetary estimate should have been kept on file to support the budget request. An estimate of some sort was drafted to produce the amount requested around May 2009. However the first few months of ARRA implementation were hurried and lacked procedural clarity; as a result this estimate was misfiled or not retained and staff have been unable to locate it.

We disagree that GSAM 536.203 was violated; an IGE was prepared albeit at the last minute in the course of the procurement. We agree that compliance with FAR 36.214 (comparison of the IGE to the offered price) should have been documented. However we also note that because of the extent of competition the IGE was not needed as a basis of

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determining price reasonableness (see FAR 15.404-1(b)(2)(i)). The memorandum should not imply that this omission had an impact that it did not have.

We disagree with the statement that "there was no documented basis for the IGE" (page 2 of the draft memorandum). The IGE may be simple, but the parametric estimate ("740 kilowatts x \$5,500 per kilowatt = \$4,070,000") is an appropriate estimate for a design-build system where the procurement process allows offerors to propose different types of system within general constraints. The draft memorandum does not seem to understand that this procurement used a "statement of objectives" (see FAR 2.101) approach - a method most commonly used for performance-based service contracts but available for other types of contract. In this case the general objective was to obtain the most cost-effective system possible within the constraints of the project budget. Because there was (intentionally) no design, there could be no detailed construction estimate.

We are not sure of the intent of the statement "The analyst indicated that, for most Recovery Act projects, a budget is already in place at inception, making the IGE unnecessary"; we believe this is an misunderstanding by OIG personnel. The projects (all work for a given building) had approved ARRA funds based on rough estimates prepared soon after passage of ARRA. The specific solicitations primarily had estimates incorporated in the various energy studies that were submitted with LSARs. This PV system was an exception to this process, as it was funded separately from most of the rest of the BA03 limited scope projects.

Finding: Price Range Narrower than Prescribed by FAR

We disagree with the OIG's claim that not using the table of estimated price ranges in FAR 36.204 did not comply with FAR. Use of the FAR 36.204 table uses "should" language. "Should" language is defined in FAR 2.101 as language that should be followed "unless inappropriate for a particular circumstance". This solicitation was a commercial item for construction solicitation. FAR 12.213 states that contracting officers should adopt commercial practices where these do not violate law or executive orders. Our market research (primarily through discussions with the National Renewable Energy Laboratory) indicated that the

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overall method we were proposing to use (an NPV evaluation that roughly stipulated the budget) was in line with commercial practice. Therefore this was an appropriate situation in which to not use the FAR 36.204 table.

We believe the discussion on page 3 of the draft memorandum misrepresents the results of the price evaluation. While the price per se (i.e., direct capital cost) of the bids was very close, the price evaluation used a net present value (NPV) methodology, which evaluates total system ownership cost over time. The calculations ranged from negative \$557,254 (i.e., a discounted cost savings to the Government of \$557,254) to a positive \$569,133 (i.e., a discounted loss to the Government of \$569,133). This is an extensive range. We also note that when a NPV method is used it is likely that at least the better offers would cluster closely together on price per se because where the per-kW installed price produces a beneficial NPV for a small system, it will produce a greater NPV for a larger system, and thus the offeror will propose the largest system possible up to the budget ceiling.

We disagree with the assertion that "there was no way to determine if this much capacity was needed, or if a lower capacity would have sufficed." This reflects a significant misunderstanding of the potential capacity of the system. The current 908 kW system will generate roughly 12% of the buildings electricity - a fairly small portion overall, as this is a large facility. While a hard system size ceiling was not set, in practice it was 1 MW due to regulatory limitations: over 1 MW the CSI incentive does not apply, net metering does not apply, and the local utility would require onerous electrical switching requirements. Therefore the required range was for a system with a capacity of 600 kW to 1 MW, and all power generated by a system in that range could clearly have been used. If a system of 1 MW had been proposed for less than the budget amount this would have reflected favorably in the NPV calculation, and the funding balance could have been reprogrammed for other work. The OIG seems to mistakenly believe the solicitation was completely open-ended.

We do not understand the first complete paragraph on page 4 of the draft memorandum, and disagree with it to the extent that it is intelligible. The statement "We disagree with the assumption that a wider price range would have resulted in bids not meeting GSA's desired results" discusses a

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fictional assumption. Our assumption was instead that we would get the best results allowing offerors to propose the best system they could provide within constraints, to be measured on a NPV basis. The OIG links lack of a full design with lack of an IGE - that is not quite true, but there is a link between lack of a full design and lack of a detailed construction estimate, versus a parametric estimate. However this is generally the case with design-build projects of various sorts, so we do not understand the OIG's point.

The OIG states (page 4 of the draft memorandum) that "It is possible that a wider price range could have resulted in lower bids for systems with lesser (but acceptable) kilowatt capacity." This is mathematically impossible, and reflects the OIG's misunderstanding of how net present value calculations work. For offers proposing systems that produce a NPV savings to the Government, a larger system will produce more savings than a smaller system (e.g., if a 100 kW system at \$5/kW installed cost produces a NPV benefit of \$100,000, then a 200 kW system at \$5/kW installed produces a NPV benefit of roughly \$200,000). The exceptions to this are:

- (1) If the power cannot be used, but as mentioned a 907 kW system will only provide about 12% of the building's needs, and there is a de facto 1 MW limitation to the size of systems that could have been proposed, so there was no possibility of this;
- (2) If the larger size has a higher rather than equal or lower per-kWh installed cost. However this would be reflected in the NPV results.

Therefore it is impossible for "systems with lesser...kilowatt capacity" to be more beneficial to the Government without this being considered in the NPV evaluation. The NPV calculation inherently considers the value of price, savings and costs and condenses them into a figure that represents the total value to the Government.

Finding: Acquisition Plan Missing Elements

We agree that costs should have been discussed more fully in the acquisition plan. However we also note that FAR 7.105(a)(3) does not require that the acquisition plan include an IGE; it requires a discussion of costs. This was included. The OIG memorandum states the acquisition plan

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did not include a "budget estimate"; that is incorrect, the budget estimate, stated as a dollar figure, is in the acquisition plan under "Estimated Value." However we agree that more discussion of the NPV methodology to be used would have been beneficial.

We also agree that it would have been better to state an anticipated period of performance. However we disagree with the claim that putting this in the acquisition plan would avoid delays. The solicitation and subsequent contract state the schedule requirements, and are used to guide this. Omission of this from the acquisition plan has had no material impact.

We generally believe that the OIG's discussion of the acquisition plan is imbalanced. The omissions are relatively minor and did not impact planning or execution of the project. This acquisition plan was reviewed by OCAO and received generally favorable comments (see email from Christopher Teti, February 8, 2010).

In general, with relation to all findings, we believe the OIG draft memorandum to be seriously imbalanced. This was a successful procurement with minor administrative flaws; the award methodology increased the value to the taxpayers in comparison to more traditional approaches.

Enclosures