



Memorandum from the Office of the Inspector General

September 24, 2024

Laura J. Campbell
Robert Bryan Williams

REQUEST FOR FINAL ACTION – EVALUATION 2024-17493 – SELECTION PROCESS
FOR MAJOR EQUIPMENT SUPPLIERS

Attached is the subject final report for your review and final action. Your written comments, which addressed your management decision and actions planned or taken, have been included in the report. Please notify us when final action is complete. In accordance with the Inspector General Act of 1978, as amended, the Office of the Inspector General is required to report to Congress semiannually regarding audits that remain unresolved after 6 months from the date of report issuance.

If you have any questions or wish to discuss our findings, please contact Amy R. Rush, Manager, Evaluations – Projects, at (865) 633-7361 or Lisa H. Hammer, Director, Evaluations – Projects, at (865) 633-7342. We appreciate the courtesy and cooperation received from your staff during the audit.

David P. Wheeler
Assistant Inspector General
(Audits and Evaluations)

ARR:KDS

Attachment

cc (Attachment):

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OIG File No. 2024-17493



Office of the Inspector General

Evaluation Report

To the Director, Supply Chain,
and to the Vice President,
Major Projects

SELECTION PROCESS FOR MAJOR EQUIPMENT SUPPLIERS

Evaluation Team

Amy R. Rush
Colin P. Ross

Evaluation 2024-17493

September 24, 2024

ABBREVIATIONS

| | |
|------|--------------------------------|
| CC&I | Corporate Credit and Insurance |
| OGC | Office of the General Counsel |
| PO | Power Operations |
| SPP | Standard Program and Process |
| TVA | Tennessee Valley Authority |

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AND ROGER T. WALDREP TO DAVID P. WHEELER



Evaluation 2024-17493 – Selection Process for Major Equipment Suppliers

EXECUTIVE SUMMARY

Why the OIG Did This Evaluation

The Tennessee Valley Authority (TVA) plans to invest more than \$20 billion for upgrades to the existing power and transmission systems and additional generation capacity over the next four years. As part of those plans, TVA will undertake several major construction projects. Two business units integral to the construction of new facilities are TVA Resource Management and Operations Services' Supply Chain organization and TVA Generation Projects and Fleet Services' Major Projects organization. Together, these business units are responsible for performing the processes associated with soliciting construction vendors and suppliers, evaluating vendor bids, and negotiating the best price for TVA. Due to the importance of the procurement process, along with increased spend related to gas construction, we performed an evaluation of TVA's solicitation, bid evaluation, and negotiation activities for major equipment suppliers for gas plant construction.

What the OIG Found

We determined the bid evaluation and negotiation processes were operating as intended; however, improvements were needed in TVA's solicitation process. Specifically, we identified an opportunity for improvement related to the development of technical standards used in the solicitation process. In addition, we determined that TVA had a plan for addressing supply chain cybersecurity risk for procurements; however, it did not address how to determine when certain cybersecurity standards applied to equipment procurements.

What the OIG Recommends

We made recommendations to TVA in relation to the solicitation process and for the establishment of a process for determining when cybersecurity standards should be applied to equipment procurements.

TVA Management's Comments

TVA management agreed with our recommendations related to the solicitation process. In addition, TVA management agreed with our recommendations related to the establishment of a process for determining when cybersecurity standards should be applied to equipment procurements and stated they would provide support to the appropriate governing business units. See the Appendix for TVA management's complete response.



Evaluation 2024-17493 – Selection Process for Major Equipment Suppliers

EXECUTIVE SUMMARY

Auditor's Response

We agree with TVA management's planned actions.

BACKGROUND

The Tennessee Valley Authority (TVA) plans to invest more than \$20 billion for upgrades to the existing power and transmission systems and additional generation capacity over the next four years. As part of those plans, TVA will undertake several major construction projects. Two business units integral to the construction of new facilities are TVA Resource Management and Operations Services' Supply Chain organization and TVA Generation Projects and Fleet Services' Major Projects organization. Together, these business units are responsible for performing the processes associated with soliciting construction vendors and suppliers, evaluating vendor bids, and negotiating the best price for TVA.

Supply Chain's mission is to "provide expertise, materials, and services to achieve business partner goals and carry out TVA's mission of service." The Supply Chain guiding principles supporting this mission include driving the lowest total cost of materials and services and maximum value through contracts and improved supplier performance. TVA's Major Projects organization has responsibility for TVA's large, non-nuclear capacity expansion projects that include the construction of new generating facilities. This responsibility includes oversight of gas construction projects on behalf of TVA's Power Operations (PO) who operate and maintain TVA's gas fleet. Supply Chain is responsible for leading the solicitation, bid evaluation, and negotiation processes for requested procurements while Major Projects personnel work with Supply Chain in the selection and bid evaluation of major equipment suppliers and in contract negotiations.

Solicitation, bid evaluation, and negotiation processes and responsibilities are outlined in various TVA procedures including TVA Standard Programs and Processes (SPPs) 04.000, *Management of the TVA Supply Chain Process*; TVA-SPP-04.002 *Procurement of Products and Services*; and the Supply Chain Buyer Guide. To summarize:

- **Solicitation Process** – For new construction projects, a Supply Chain contracting officer and applicable Major Projects personnel will coordinate to develop a procurement schedule, bid evaluation criteria, and list of suppliers to invite to the bid process once a procurement is requested by Major Projects. The Supply Chain contracting officer will then assemble the solicitation documentation consisting of a request for proposal for the identified scope of work; draft contract, including technical specifications provided by Major Projects and PO personnel; and other related documentation, all of which are provided by the contracting officer to the list of qualified bidders.
- **Bid Evaluation Process** – The contracting officer also leads the commercial bid evaluation, which includes the assessment of (1) pricing terms, (2) exceptions to the terms and conditions of the contract, (3) compliance with applicable laws and regulations, and (4) effectiveness of supplier proposals.

The contracting officer also provides oversight to the technical bid evaluation team, which consists of Major Projects and business unit operations personnel. Technical bid evaluations include assessment of bidder responses to the proposal, exceptions, and clarifications to technical specifications and review of historical performance of the bidders, among other factors.

- **Negotiation Process** – Once bid evaluations have been completed, a bidder is selected to go forward in the negotiation process. The contracting officer leads this process with participation from Major Projects personnel. The negotiation process involves meeting with the selected supplier and reviewing and resolving suggested changes (known as contract redlines) to the draft contract. Once negotiations are complete, concurrences must be obtained from applicable personnel in various TVA organizations.

TVA's Office of the General Counsel (OGC); Corporate Credit and Insurance (CC&I), an organization under TVA's Treasurer and Chief Risk Officer; and Cybersecurity Risk Management under TVA's Technology and Innovation organization are all involved in the solicitation and negotiation processes. Specifically, OGC personnel are responsible for review of the draft contract to ensure that required contract clauses are incorporated and for participation in negotiations with the selected supplier. Additionally, CC&I personnel review the insurance clauses included in the draft and negotiated contracts and identify supplier business practices or actions that could expose TVA to supplier credit or performance risk. Further, Cybersecurity Risk Management is responsible for the identification of supply chain cybersecurity risk. This responsibility includes (1) conducting supplier cybersecurity risk evaluations for procurements pursuant to a cyber standard for which TVA is required to comply, and (2) continuous monitoring of the supplier cybersecurity risk profile. Cybersecurity Risk Management personnel also review draft and negotiated contract language to ensure that applicable information technology clauses are included in the contract.

As of February 2024, there were eight contracts in place and three planned solicitations for major construction projects. Of the eight contracts and three planned solicitations, three contracts totaling approximately \$3.6 billion, were specifically related to major equipment of gas construction projects. Due to the importance of the procurement process, along with the increased spend related to gas construction, we performed an evaluation of the solicitation, bid evaluation, and negotiation processes related to gas construction. The focus of this review is on major equipment suppliers for gas construction projects.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to determine whether TVA performed solicitation, evaluation, and negotiation processes in accordance with TVA policies and procedures for major equipment suppliers of gas construction projects. The scope of our evaluation was the solicitation, bid evaluation, and negotiation practices, as of April 2, 2024, and a judgmentally selected procurement initiated on March 7, 2022. To achieve our objective, we:

- Examined applicable TVA and Supply Chain SPPs and other guidance related to solicitation, bid evaluation, and negotiation processes to identify process steps.
- Interviewed personnel from Supply Chain, Major Projects, PO, Transmission Planning, OGC, CC&I, and Cybersecurity Risk Management to (1) gain an understanding of how TVA personnel perform solicitation, bid evaluation, and negotiation processes and (2) obtain associated process documentation.
- Compared current solicitation, bid evaluation, and negotiation practices to processes outlined in the SPPs to identify exceptions.
- Judgmentally selected the Cumberland and Kingston Energy Solutions projects procurement¹ and tested solicitation, bid evaluation, and negotiation process documentation to determine whether (1) the request for proposal and related documentation were communicated to qualified bidders and included required information, (2) bid evaluation criteria was developed prior to the bid process and bid evaluation ratings were reasonable, and (3) appropriate reviews and concurrences were obtained prior to contract award. From the procurement, we also judgmentally selected:
 - commercial bid evaluation items, (1) including compliance with applicable laws and regulations and (2) exceptions to the terms and conditions of the contract to confirm that evaluation scoring was supported by applicable documentation.
 - technical bid evaluation items, including (1) compliance with TVA specifications and design parameters, (2) specific performance and equipment options, and (3) historical performance and reliability of the suppliers to confirm that evaluation scoring was supported by applicable documentation.
- Examined TVA Learning Management System training records to determine whether Supply Chain and/or Major Projects personnel had taken specific cyber-related training.

This evaluation was conducted in accordance with the Council of the Inspectors General on Integrity and Efficiency's *Quality Standards for Inspection and Evaluation*.

¹ Major equipment for the Cumberland and Kingston Energy Solution projects were included in the same bid.

FINDINGS AND RECOMMENDATIONS

We determined the bid evaluation and negotiation processes were operating as intended; however, improvements were needed in TVA's solicitation process. Specifically, we identified an opportunity for improvement related to the development of technical standards used in the solicitation process. In addition, we determined that TVA had a plan for addressing supply chain cybersecurity risk for procurements; however, it did not address how to determine when cybersecurity standards applied to equipment procurements.

BID EVALUATION AND NEGOTIATION PROCESSES ARE OPERATING AS INTENDED

According to TVA-SPP-04.000, *Management of TVA Supply Chain Process*, the contracting officer is responsible for evaluating commercial proposals and business unit personnel are responsible for evaluating technical proposals. Furthermore, the negotiation process is critical, as it can impact the price, delivery, and business relationships with the supplier. Both bid evaluation and negotiation processes can help align expectations between TVA and the supplier, mitigate contract risks, and create value to TVA. We examined both bid evaluation and negotiation processes and determined they were operating as intended.

Bid Evaluation Process

We judgmentally selected commercial bid evaluation items and confirmed the applicable commercial bid evaluation scoring was in alignment with the evaluation scoring criteria. As stated previously, suppliers review the draft contract language and redline items for which they do not agree or have proposed changes. We determined, based on review of the contract proposals, including contract redlines, that scoring related to exceptions to the terms and conditions for each of the suppliers was reasonable.

We also selected a nonstatistical sample of technical bid evaluation items for review, which included (1) compliance with TVA specifications and design parameters, (2) specific performance and equipment options, and (3) historical performance and reliability of the suppliers. We examined technical documentation provided by the suppliers in conjunction with notes made by the technical bid evaluation team and other TVA documentation. Based on review of the documentation and discussions with Major Projects and PO personnel, we determined the scores on the bid evaluation were reasonable. We also confirmed that appropriate concurrences for technical reviews were obtained in accordance with TVA-SPP-04.002, *Procurement of Products and Services*.

Negotiation Process

According to the Supply Chain Buyer Guide, the recommendation for the selected supplier is to be documented in the contract files. Additionally, the contracting officer is to provide a written notice of nonselection to bidders who

were not selected for contract award and to conduct debrief meetings, if requested by the suppliers. TVA policies and procedures also require that OGC, CC&I, and Cybersecurity Risk Management personnel review contract language for concurrence and that CC&I personnel perform a credit analysis for the selected supplier.

We confirmed that the recommendation for the selected supplier was included in the contract files and included concurrences from Major Projects and PO personnel. We also examined communication with suppliers and noted the contracting officer had communicated nonselection to the bidders who were not selected for contract award. We also obtained documentation from the contracting officer reflecting that debrief meetings occurred with these suppliers. In addition, we obtained evidence reflecting that OGC, CC&I, and Cybersecurity Risk Management personnel had reviewed the language to be included in the executed contract and provided concurrences, where applicable. Contract files also contained evidence that a credit analysis was performed by CC&I on the selected supplier.

IMPROVEMENTS NEEDED IN THE SOLICITATION PROCESS

During the solicitation phase, it is the responsibility of the contracting officer to determine whether suppliers are qualified and to establish communications with those bidders. Both Major Projects personnel and the contracting officer have responsibilities related to ensuring that required clauses are included in the contract, and that bid criteria, including weightings, are developed in advance of the bid process.

We interviewed the contracting officer about current practices, examined documentation for the Cumberland and Kingston major equipment procurement, and confirmed that verification of supplier qualifications was performed. In addition, we examined communications and confirmed that all bidders were provided the same information, noting that questions posed by bidders, along with TVA responses, were communicated through the application used by Supply Chain.

While examining the technical specifications provided to suppliers, we found that an instrumentation and control system engineering specification was not provided. In addition, we noted that several TVA specifications were out of review cadence and/or included references to industry standards that were superseded. Bidders' technical exceptions and clarifications indicated (1) elements of the TVA specifications were not applicable primarily because they were not related to new construction, and (2) standards within the specifications were no longer valid. Providing all applicable specifications and confirming all specifications are up to date as part of the solicitation process could expedite the bid evaluation and negotiation processes, and decrease the risk of unsatisfactory equipment being procured.

According to TVA procedures, certain clauses are to be included in TVA contracts. These include the Business Ethics and Information Technology clauses. As stated previously, solicitation documentation provided to the suppliers consisted of a draft contract, which contained specific terms and conditions of the contract. Suppliers review the draft contract language and redline items for which they do not agree or have proposed changes. Because the supplier's responses to the proposals included changes to the draft contract language, we confirmed the draft contract included the required Business Ethics and Information Technology clauses and that OGC had reviewed the draft contract. TVA-SPP-04.002, *Procurement of Products and Services*, also required that applicable safety and health clauses be included in solicitation documentation. We examined the solicitation documentation and confirmed this information was included.

Both TVA-SPP-04.002, *Procurement of Products and Services*, and the Supply Chain Buyer Guide address the potential for bias in the bid evaluation process by indicating that bid evaluation criteria, including weights, are to be determined by Supply Chain and Major Projects prior to review or bid evaluation of supplier proposals. For the procurement in our sample, we confirmed that the initial bid evaluation criteria and weightings were developed in advance of the review and bid evaluation of vendor proposals. We also noted the criteria and weightings appeared reasonable based on review of the solicitation documentation and explanations from the contracting officer and Major Projects personnel.

Recommendations

We recommend the Senior Vice President, Generation Projects and Fleet Services, work with PO to confirm that all TVA specifications (1) are included in solicitation documentation, (2) have been updated, and (3) are applicable to the type of project being bid.

TVA Management's Comments – TVA management agreed with the recommendations and will work with PO on future procurements to confirm that all applicable TVA specifications are included in solicitation documentation and are within the required update cadence. See the Appendix for TVA management's complete response.

Auditor's Response – We agree with TVA management's planned actions.

INCREASED SUPPLY CHAIN CYBERSECURITY RISK

TVA is subject to regulatory standards for cybersecurity of its electric system. These standards require that cybersecurity controls be applied to procurements of equipment, software, and services in order to protect the supply chain from cybersecurity risks. As part of these standards, TVA is responsible for developing a Supply Chain cybersecurity risk management plan. According to TVA procedures, it is the responsibility of the business unit requesting the procurement to identify whether the procurement is subject to additional cybersecurity controls and to alert Supply Chain personnel. However, according

to regulatory personnel, it is the responsibility of the organization that owns the asset that is being procured, which may not be the same organization that is responsible for requesting the procurement. Supply Chain personnel are to also be aware of the potential for additional cybersecurity controls whenever processing a procurement that meets certain criteria outlined in the Supply Chain Buyer Guide. If a procurement is flagged as meeting the criteria, then Supply Chain personnel are to make sure that applicable terms and conditions related to information technology are included in the contract and to obtain a supplier cybersecurity risk evaluation from TVA's Cybersecurity Risk Management group prior to award of the contract. In addition, according to the Supply Chain contracting officer and TVA's Learning Management System, there is training for Supply Chain that covers responsibilities of Supply Chain personnel with regard to this cybersecurity regulatory standard.

We could not determine whether a supplier cybersecurity risk evaluation should have been performed for the Cumberland and Kingston major equipment procurement, as there was no determination made as to whether the standards applied to the equipment covered in the contract. We interviewed multiple TVA personnel about the process, including PO, Transmission Planning, Major Projects, and Supply Chain and could not identify what position had the responsibility for making the determination. Cybersecurity Risk Management personnel believed that a supplier cybersecurity evaluation should have been performed for the Cumberland and Kingston major equipment procurement, but stated that Transmission Planning would be the organization to make that decision. However, the regulatory compliance manager stated that PO is ultimately responsible for determining supply chain cybersecurity risk, as they have the technical knowledge of the equipment covered in the contract. Establishing and/or clarifying responsibilities related to Supply Chain cybersecurity compliance with standards and ensuring those responsibilities are carried out in a timely manner could assist with determining which procurements are subject to standards and reduce Supply Chain cybersecurity risk.

Recommendations

We recommend the Senior Vice President, Generation Projects and Fleet Services and Vice President, Supply Chain, work with Transmission Planning and PO personnel to (1) assess the Cumberland and Kingston procurement for cybersecurity risk and take appropriate actions, if necessary, and (2) establish and/or clarify responsibilities related to Supply Chain cybersecurity compliance with standards for equipment covered in procurements.

TVA Management's Comments – TVA management agreed with the recommendation related to working with Transmission Planning and PO personnel to assess the Cumberland and Kingston procurement for cybersecurity risk and take any necessary actions. Supply Chain and Major Projects management also partially agreed with the recommendation related to establishment and clarification of responsibilities for cybersecurity compliance with standards for equipment covered in procurements. Management stated neither business unit governs (1) determining if equipment is subject to

cybersecurity regulatory standards or (2) establishing who should be responsible for making the ultimate determination. Supply Chain and Major Projects management plan to provide (1) the subject audit and subsequent OIG recommendation to Transmission Planning and PO and (2) support to both organizations in their efforts, as needed. See the Appendix for TVA management's complete response.

Auditor's Response – We agree with TVA management's planned actions.

September 17, 2024

David P. Wheeler, WT 2C-K

**RESPONSE TO REQUEST FOR COMMENTS AND MANAGEMENT DECISION – DRAFT
EVALUATION 2024-17493 – SELECTION PROCESS FOR MAJOR EQUIPMENT SUPPLIERS**

Reference: Request for Comments and Management Decision – Draft Evaluation 2024-17493 –
Selection Process for Major Equipment Suppliers Memorandum dated August 22, 2024

Supply Chain and GP&FS (Major Projects) have reviewed the report and provide the following
comments and management decisions pertaining to the findings and recommendations of the
subject audit:

IMPROVEMENTS NEEDED IN THE SOLICITATION PROCESS

Major Projects agrees with the OIG's recommendation and will work with PO on future
procurements to confirm that all applicable TVA specifications (1) are included in solicitation
documentation and (2) are within the required update cadence.

INCREASED SUPPLY CHAIN CYBERSECURITY RISK

Supply Chain and Major projects agree with the OIG's recommendations to work with
Transmission Planning and PO personnel to assess the Cumberland and Kingston procurement
for cybersecurity risk and take any necessary actions. Specifically, Supply Chain will initiate a
request for a cyber security risk evaluation if deemed appropriate by the responsible business
unit. Supply Chain and Major Projects partially agree with the OIG's recommendation to work
with Transmission Planning and PO to establish and/or clarify responsibilities related to Supply
Chain cybersecurity compliance with standards for equipment covered in procurements. Neither
Supply Chain nor Major Projects are the governing business units for (1) determining if
equipment is subject to cybersecurity regulatory standards or (2) establishing who should be
responsible for making the ultimate determination. Supply Chain and Major Projects agree to (1)
provide the subject audit and subsequent OIG recommendation to Transmission Planning and
PO, and (2) provide our support to Transmission Planning and PO in their efforts to establish
and/or clarify responsibilities, as needed.

CONCLUSION

TVA concurs with the OIG in areas under our respective governance.

David P. Wheeler
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We would like to thank Amy Rush and Lisa Hammer for their professionalism in conducting this audit. If you have further questions please contact Isaac Cudzilo, Principal Contracts Manager at ijcudzilo@tva.gov.



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Vice President, Supply Chain



Roger Waldrep
Vice President, Major Projects

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