



Memorandum from the Office of the Inspector General

September 12, 2024

John M. Thomas III
Rebecca L. Jones

**REQUEST FOR FINAL ACTION – EVALUATION 2023-17461 – TVA'S PORTFOLIO
MANAGEMENT PROCESS**

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 Noel K. Kawado, Senior Auditor, Evaluations – Projects, at (865) 633-7348 or Lisa H. Hammer, Director, Evaluations – Projects, at (865) 633-7342. We appreciate the courtesy and cooperation received from your staff during the evaluation.

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

NKK:KDS
Attachment

cc (Attachment):

TVA Board of Directors
Janda E. Brown
Jennifer L. Bryant
Buddy Eller
David B. Fountain
Jeffrey J. Lyash
Jill M. Matthews
Richard D. Owens
Ben R. Wagner
OIG File No. 2023-17461



Office of the Inspector General

Evaluation Report

To the Executive Vice President,
Chief Financial and Strategy
Officer, and to the Vice
President, Financial Operations
and Performance

TVA'S PORTFOLIO MANAGEMENT PROCESS

Evaluation Team
Noel K. Kawado
Justin B. Franklin

Evaluation 2023-17461
September 12, 2024

ABBREVIATIONS

BU	Business Unit
C55	Copperleaf C55
CEO	Chief Executive Officer
FO&P	Financial Operations and Performance
NPV	Net Present Value
PRB	Project Review Board
R&D	Research and Development
SPP	Standard Programs and Processes
TVA	Tennessee Valley Authority
TVA Board	TVA Board of Directors

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MEMORANDUM DATED AUGUST 26, 2024, FROM JOHN THOMAS AND
REBECCA JONES TO DAVID P. WHEELER



Evaluation 2023-17461 – TVA's Portfolio Management Process

EXECUTIVE SUMMARY

Why the OIG Did This Evaluation

Tennessee Valley Authority's (TVA) 2023 Annual Report states that TVA plans to invest more than \$20 billion in capital investment for additional generation capacity, upgrades to the existing power system, and improvements to transmission systems over the next 4 years. TVA has identified a risk related to its ability to borrow money in its 2023 Form 10K, which may impact its ability to make these planned capital investments. The increase in new planned generation projects over the coming years, coupled with TVA's financial constraints, highlights the significance of effectively managing TVA's portfolio of projects.

According to TVA's Standard Programs and Processes (SPP) 19.003, *Portfolio Management Process*, the purpose of TVA's portfolio management process is to ensure TVA's investment portfolio of projects and programs (1) align with the goals and strategic objectives of TVA, Strategic Business Units and Business Units; and (2) optimize investment requests for TVA based on value as well as inputs from the power system plan and the long-range financial plan.ⁱ Financial Operations and Performance governs the portfolio management process through TVA-SPP-19.003 and a *Portfolio Management Guide*.ⁱⁱ Due to the importance of the prioritization and funding of projects, we initiated an evaluation to determine whether TVA's portfolio management process is operating as intended. The scope of our evaluation included all active and planned projects with a forecasted cost greater than \$10 million as of October 1, 2023.

What the OIG Found

We determined that TVA's portfolio management process is not operating as intended. Specifically, we found:

- Some types of projects did not follow the portfolio management process as required by TVA-SPP-19.003. In addition, TVA does not

ⁱ TVA uses a Value Decision Model approach that helps organizations align decisions to realize the most value from their investments. Value based optimization identifies the optimal combination of investments started at the ideal time, which takes into consideration funding or other constraints to deliver the greatest value to TVA.

ⁱⁱ According to TVA-SPP-19.003, TVA's *Portfolio Management Guide* "helps guide the business in making decisions about the investment mix, match investments to objectives, and balances risk against performance."



Evaluation 2023-17461 – TVA's Portfolio Management Process

EXECUTIVE SUMMARY

have a reverse capital flex list,ⁱⁱⁱ as described in the *Portfolio Management Guide*.

- Economic analyses were not performed for 9 of 17 projects reviewed with a forecasted cost greater than \$10 million, although TVA's *Portfolio Management Guide* states economic analyses are required for all projects equal to or greater than \$10 million.
- Economic analyses for two TVA Board of Directors (TVA Board) approved projects had negative net present values, which indicates the projects might not add value to TVA. These analyses, as well as additional costs for one of the projects, were not provided to the TVA Board.
- Two purchase orders were issued prior to spend approval for one project, indicating a control gap.

What the OIG Recommends

We recommend TVA management address issues related to (1) projects selected outside the portfolio management process, (2) a reverse capital flex list, (3) economic analyses, (4) disclosure of relevant information to the TVA Board, and (5) unapproved commitments of TVA funds. Detailed recommendations are contained in the body of the report.

TVA Management's Comments

In response to our draft report, TVA management provided informal comments that we incorporated as appropriate. In their formal response, TVA management provided actions they would take to address our recommendations. Further, in response to the recommendation on disclosing relevant information to the TVA Board, management stated the TVA Board receives updates on cost, scope, and schedule of all projects exceeding \$200M and additional project-related information is provided to the TVA Board as requested. See the Appendix for TVA management's complete response.

Auditor's Response

While we agree with TVA management's planned actions, we believe all material project-related information should be presented to the Board to

ⁱⁱⁱ According to the *Portfolio Management Guide*, the reverse capital flex list represents a list of projects or programs that could be deferred, delayed, or stopped completely in case of inadequate funds. The list should include projects or programs of lower value that will not cause a significant impact in operational performance or safety.



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EXECUTIVE SUMMARY

add transparency to the project approval process and ensure decisions are made based on complete information.

BACKGROUND

Tennessee Valley Authority's (TVA) 2023 Annual Report states that TVA plans to invest more than \$20 billion in capital investments for additional generation capacity, upgrades to the existing power system, and improvements to transmission systems over the next 4 years. In its 2023 Form 10K, TVA indicated that approaching or reaching the debt ceiling may negatively affect its ability to borrow money, which could impact the completion of these planned capital investments. The increase in new planned generation projects over the coming years, coupled with TVA's financial constraints, highlights the significance of effectively managing TVA's portfolio of projects.

According to *The Standard for Portfolio Management*,¹ portfolio management is the centralized management of projects and programs to achieve strategic objectives. Portfolio management aligns with the organizational strategy by selecting the best portfolio components, prioritizing the work, providing the needed resources, and overseeing or working with portfolio managers, among other things.

TVA Standard Programs and Processes (SPP) 19.003, *Portfolio Management Process*, states the purpose of TVA's portfolio management process is "to ensure TVA's investment portfolio of projects and programs (1) align with the goals and strategic objectives of TVA, Strategic Business Units (SBU), and Business Units (BU); and (2) optimize investment requests for TVA based on value as well as inputs from the power system plan and the long-range financial plan." Financial Operations and Performance (FO&P), a BU under TVA Financial Services, is responsible for managing TVA's portfolio of projects and is the executive owner of the portfolio management process. FO&P governs the portfolio management process through TVA-SPP-19.003 and a *Portfolio Management Guide*.²

Activities within the portfolio management process include, among other things, (1) allocating and reallocating portfolio funding, (2) working with BU asset owners to develop and obtain funding for a portfolio of optimized projects linked to TVA's strategic objectives, (3) monitoring and reporting on portfolio performance (including portfolio benefits), (4) maintaining the *Portfolio Management Guide*, and (5) governing the project/program funding authorization and workflow process. The *Portfolio Management Guide* and related documentation specifies the level of funding authorization approvals required based on a project's forecasted cost. Part of the funding authorization process, when applicable, includes a review by the Project Review Board (PRB), which operates under the

¹ The Project Management Institute, a global, nonprofit, project management membership organization that creates industry standards for project management, including *The Standard for Portfolio Management*.

² According to TVA-SPP-19.003, TVA's *Portfolio Management Guide* "helps guide the business in making decisions about the investment mix, match investments to objectives, and balances risk against performance."

express authority of the Chief Executive Officer (CEO). The PRB, made up of TVA personnel from across the agency, reviews projects having a forecasted cost equal to or greater than \$10 million and makes recommendations to the CEO and their direct reports whether to move the project forward. In addition, projects having a forecasted cost equal to or greater than \$10 million require an economic analysis. The Enterprise Planning's Portfolio Analytics group has governance over economic analyses, including those related to capital projects and major asset upgrades or acquisitions. TVA-SPP-13.950, *Economic Analysis*, contains specific requirements related to performing economic analyses.

Copperleaf C55 (C55) is the system of record for funding authorizations and the official enterprise tool for portfolio management and optimization. According to the *Portfolio Management Guide*, TVA BUs are to initiate investment requests within C55, which then estimate a project's value related to TVA's strategic priorities before inclusion in the BU's project portfolio. All BUs are required to use this value-based decision framework in C55 to optimize projects.

We initiated this evaluation due to the importance of the prioritization and funding of projects.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to determine whether TVA's portfolio management process is operating as intended. The scope of our evaluation included all active and planned projects with a forecasted cost greater than \$10 million as of October 1, 2023. To achieve our objectives, we:

- Interviewed personnel from FO&P's Portfolio and Capital Allocation group, Portfolio Analytics, Treasury and Risk, and the PRB to obtain an understanding of how TVA executes portfolio management compared to the documented process.
- Reviewed the Project Management Institute's *The Standard for Portfolio Management* to gain an understanding of best practices for portfolio management.
- Reviewed the following policies and procedures to obtain an understanding and identify key requirements of the portfolio management process:
 - TVA-SPP-19.003, *Portfolio Management Process*
 - *Portfolio Management Guide*
- Reviewed TVA-SPP-13.950, *Economic Analysis*, to obtain additional information of how economic analyses are performed.
- Reviewed TVA Board Practices, which specifies certain delegations to the CEO, to obtain an understanding of the CEO's spending authority related to capital projects.

- Reviewed select PRB documentation to determine if certain information was communicated prior to approval of funding.
- Selected a judgmental³ sample of 17 (\$11.1 billion) active and planned projects from a listing of 183 investment requests⁴ (\$20.7 billion), with a forecasted cost greater than \$10 million, as of October 1, 2023. We reviewed the projects to determine whether economic analyses were completed and funding authorization approvals were obtained in accordance with applicable policies and procedures.

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

FINDINGS

We determined that TVA's portfolio management process is not operating as intended. Specifically, we found:

- Some types of projects did not follow the portfolio management process as required by TVA-SPP-19.003. In addition, TVA does not have a reverse capital flex list, as described in the *Portfolio Management Guide*.
- Economic analyses were not performed for 9 of 17 projects we reviewed with forecasted cost over \$10 million. TVA's *Portfolio Management Guide* states economic analyses are required for all projects equal to or greater than \$10 million.
- Economic analyses for two TVA Board of Directors (TVA Board) approved projects had negative net present values (NPV), which indicates the projects might not add value to TVA. These analyses, as well as additional costs for one of the projects, were not provided to the TVA Board.
- Two purchase orders were issued prior to spend approval for one project, indicating a control gap.

SOME TYPES OF PROJECTS DID NOT FOLLOW THE PORTFOLIO MANAGEMENT PROCESS

The purpose of TVA's portfolio management process is to ensure TVA's projects align with goals and strategic objectives of TVA and are optimized based on their value to TVA. This is accomplished through the oversight of Portfolio and Capital Allocation personnel, who are tasked with (1) driving the highest

³ We selected our sample projects based on several factors, including: project dollar value, public interest surrounding the project, utilization of new technology and/or concerns expressed during interviews about specific projects.

⁴ Each project in C55 has an investment request number and is used, in part, for activating project spend once the required funding approvals are obtained.

consistency, quality, and value in the portfolio management function; (2) aligning and establishing capital spend targets in accordance with TVA's strategy; and (3) ensuring controls are defined and monitored for project funding authorizations and oversight. According to TVA-SPP-19.003 and the *Portfolio Management Guide*, all BU project portfolios are to use the value-based decision framework in C55 to optimize projects. The *Portfolio Management Guide* states value-based optimization identifies the optimal combination of investments started at the ideal time, which takes into consideration funding or constraints to deliver the greatest value to TVA. During our evaluation, we determined that new generation, Economic Development, and Research and Development (R&D) projects are selected outside of this process. Our sample of 17 projects reviewed included 10 new generation projects (forecasted cost of \$10.6 billion), one economic development project (forecasted cost of \$273.7 million), and one R&D project (forecasted cost of \$34.1 million).

- According to Portfolio and Capital Allocation personnel, all new generation projects are optimized separately by Enterprise Planning's Resource Strategy group and are not included in the normal C55 optimization. Interviews with Resource Strategy personnel indicated that new generation projects are selected through a Resource Strategy modeling tool, EnCompass, using the Integrated Resource Plan⁵ as a guideline. According to FO&P personnel, various Enterprise Planning policies and procedures⁶ outline the processes, accountabilities, and resulting planning products associated with resource planning. However, it is unclear how these policies and procedures align to the portfolio management process and how selection and optimization of new generation projects is performed.
- According to Economic Development, TVA initiates economic development projects based on commitments made to potential customers. For example, FO&P indicated they had to find money to fund an economic development project that was committed to and initiated outside the normal process.
- According to TVA leadership, R&D investments do not compete financially for funding. In addition, the Vice President, Innovation and Research, stated a Vonore Battery R&D project would "not go through [the] normal prioritization process," because it would be considered R&D and "will be treated more as an investment," going to the PRB for informational purposes only.

These projects are not optimized through C55, and are added to C55 for funding purposes only. FO&P indicated their involvement in these projects was primarily limited to making sure the proper approvals were obtained prior to the release of

⁵ TVA's Integrated Resource Plan is a power planning roadmap that examines a variety of economic, regulatory and market-driven scenarios, and strategies (both inside and outside TVA's control) to help TVA respond to changing energy demands while striving to provide reliable power at the lowest possible cost.

⁶ Policies and procedures include TVA-SPP-33.000, *Resource Planning*, TVA-SPP-33.100, *Capacity Planning*, TVA-SPP-33.200, *Long Term Generation Planning*, and TVA-SPP-33.400, *Outage Derate and Must Run Concurrence Process*.

funds. FO&P is responsible for managing TVA's project portfolio, yet projects related to new generation, as well as economic development and R&D projects, do not follow TVA's portfolio management process. Projects initiated outside the portfolio management process prevent enterprise-wide project optimization to ensure the greatest value to the ratepayers. This may be compounded by a failure to proactively identify projects that may need to be deferred or canceled in order to provide funding for a new economic development-related or R&D project. Also, as noted in the *Portfolio Management Guide*, each BU is to compile a reverse capital flex list of projects or programs that could be deferred, delayed, or stopped completely in case of inadequate funds. This list is to be updated quarterly in accordance with Portfolio and Capital Allocation's discretion and is maintained throughout the fiscal year. Projects or programs on this list should be those of lower value that do not significantly impact operational performance or safety. Having a reverse capital flex list helps mitigate the risk that lower priority projects are executed before projects impacting operational performance or safety.

The *Portfolio Management Guide* states that Portfolio and Capital Allocation will consolidate all of the BU reverse flex lists for optimization. However, according to FO&P personnel, a reverse capital flex list has not been compiled since FY 2021.

ECONOMIC ANALYSES WERE NOT PERFORMED FOR ALL PROJECTS

As previously stated, projects with a forecasted cost of \$10 million or greater require an economic analysis be performed. According to TVA-SPP-13.950, *Economic Analysis*, the strategic BU that owns the project is responsible for ensuring the economic analysis is performed before the project goes to the PRB, and Portfolio Analytics is responsible for reviewing the economic analyses. The economic analysis review should consist of (1) a reasonableness check on any estimated project benefits and (2) the calculation of the NPV of all forecasted cost and benefit cash flows associated with the project's implementation. According to TVA-SPP-13.950, the goal of an economic analysis is to minimize TVA ratepayer cost and risk, and a positive NPV means the project would add value to TVA.

According to Portfolio Analytics, the economic analysis is a factor in deciding whether to proceed with a project. We tested 17 projects to determine whether economic analyses were completed as required. We determined economic analyses were not completed in accordance with TVA-SPP-13.950 for 9 projects, as shown in the table on the following page.

Project Type	Number of Projects	Number Without Economic Analysis	Forecasted Cost of Projects Without Economic Analysis (millions)
New Generation	10 ⁷	8	\$9,683
Economic Development	1	-	-
Research and Development	1	1	\$34
Cloud Asset	2	-	-
Base Capital	3	-	-
Total Projects	17	9	\$9,717

Although there is no allowance for exemptions in the portfolio management process, Portfolio and Capital Allocation and Portfolio Analytics personnel informed us certain projects were considered to be exempt from the requirement of an economic analysis as described in TVA-SPP-13.950.

- According to TVA personnel new generation projects are “exempt” from an economic analysis because they had already been determined to be “least cost” alternatives for TVA. TVA’s “Statutory and Guiding Principles” indicates least cost planning is focused on achieving least cost on a system basis. Further, TVA documentation indicates that least cost planning considers cost, reliability and resiliency, diversity, flexibility, risk, and environmental responsibility. An economic analysis, conversely, is focused on the expected value of the individual project and whether the project itself adds value to the ratepayer.

As previous described, TVA-SPP-13.950 requires an economic analysis to include the calculation of the NPV of all forecasted cost and benefit cash flows associated with the project’s implementation, versus a focus on low cost. However, the connection between the Enterprise Planning procedures previously described and TVA-SPP-13.950 Economic Analysis is unclear.

- TVA personnel stated a Vonore Battery project was considered exempt because it was an R&D project. Portfolio Analytics personnel provided documentation which stated that the capacity alone would not justify the project, but that the project “did not have to compete based on a[n] ROI [return on investment].” Further, this documentation noted it was “extremely difficult to quantify R&D value.” Project selection appeared to occur with limited consideration of the project’s economic value to TVA, which could limit TVA’s financial flexibility.

According to TVA-SPP-13.950, a project economic analysis review is to be reviewed by the PRB prior to PRB approval. The minimum standards for this review are (1) a reasonableness check of project benefits and (2) the calculation

⁷ One project had not yet gone to the PRB at the time of our fieldwork; therefore, an economic analysis was not yet required. Another project, Lawrence County Solar, had an economic analysis completed initially; however, the project was subsequently considered exempt from an economic analysis because it had been added to TVA’s capacity plan; therefore, the economic analysis was not used.

of NPVs, as well as other metrics as applicable. Without performing economic analyses, the value of the project may not be known prior to approval.

ECONOMIC ANALYSES RESULTS WERE NOT CONSIDERED IN THE DECISION TO MOVE FORWARD FOR TWO PROJECTS

TVA-SPP-13.950 states that the NPV of a project should be reviewed by the PRB as part of the economic analysis and prior to PRB approval. Since the stated goal of an economic analysis is to minimize TVA ratepayer cost and risk, a project with a negative NPV could increase both factors. Two of the projects in our sample had an economic analysis performed that resulted in a negative NPV, indicating the projects might not add value to TVA. Specifically,

- As noted previously, the Lawrence County Solar project, with an estimated cost of \$465.8 million, did have an economic analysis completed; but because this project became a part of the capacity plan, it was then considered “exempt” and the economic analysis was not used. The economic analysis conducted in August 2021 showed a negative NPV of \$51.6 million. An updated economic analysis was performed between August 2022 and January 2023 that increased the estimated negative NPV to \$66.8 million.
- For a TVA project to support an industrial customer, we were provided two economic analyses. The first economic analysis was completed for one stage of the project in November 2021 and indicated a positive NPV of \$149.9 million. However, at the request of a PRB member, a subsequent analysis of all three stages of the project was completed in August 2023, and yielded a negative NPV of \$221.7 million, which represented a negative \$371.6 million swing. According to TVA personnel, an economic analysis was not completed prior to the TVA Board approval of the project in October 2021, and the Board was not provided the economic analyses that were completed after the project was approved. They also indicated the TVA Board was only provided the capital costs related to the project but not the ongoing costs associated with the project. Other economic metrics were also calculated as part of the August 2023 analysis, which show a discounted payback period⁸ of “never” meaning TVA would never fully recover the project’s cost. According to a PRB member, the project was allowed to move forward due to the project’s positive impact on TVA’s economic development mission.

A TVA training document, “Calculating Project Benefits,” dated October 2019, describes Portfolio Analytics’ methodology for completing economic analyses and states “Since our goal is to increase ratepayer wealth, NPV is a direct measure of how well this project will meet our goal.” Moving forward with projects with negative NPVs indicates that the economic viability of these projects was not a priority consideration. According to TVA personnel, economic analyses are not provided to the TVA Board. Further, the TVA Board was not

⁸ A discounted payback period is the time it takes to fully recover the project’s cost with all cash flows expressed as present values.

made aware of all known costs related to the economic development project at the time it was approved. Without including all costs associated with capital projects, providing economic analysis results and updates when significant changes in estimates occur, the TVA Board lacks complete information to make their decisions.

CONTROL GAP RELATED TO APPROVAL OF PROJECT SPEND

According to the *Portfolio Management Guide*, the PRB provides oversight for TVA projects and programs and serves as a control for project and program authorization approvals. During our evaluation, we reviewed selected PRB packages. Certain e-mail documentation within the July 2023 PRB package caused us to review purchase orders tied to a Transmission project. We identified two purchase orders for approximately \$14.5 million for transmission upgrades to support the Kingston Energy Solution project that were issued prior to the required project approvals. Based on discussions with FO&P personnel, there is currently no control in place in FO&P to prevent a purchase order from being executed before required approval is obtained from the PRB and/or the TVA Board, as FO&P does not become aware of a purchase order until actual purchase order charges are recorded in the financial system.

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As previously stated, portfolio management is the centralized management of projects and programs to achieve strategic objectives. The Project Management Institute indicates that portfolio management should link with organizational strategy and strategic business execution, with the primary goal of adding value to the organization. Our findings indicate that TVA's current portfolio management process does not ensure projects are optimized across TVA from a holistic standpoint, which can result in projects with a lower priority being initiated before those having higher priorities. Further, without performing economic analyses and considering those in decision making, TVA may have more projects with a negative NPV than are desirable. TVA expects to make significant investments in capital projects in the coming years and their current approach to portfolio management may not provide the best value to residents of the Tennessee Valley.

RECOMMENDATIONS

1. We recommend the Executive Vice President, Chief Financial and Strategy Officer, in conjunction with the Vice President, FO&P:
 - a. Ensure all projects are optimized in a consistent and holistic manner to ensure the most value to TVA ratepayers.

TVA Management's Comments – TVA management stated
 (a) Enterprise Planning will update appropriate policies, procedures, and guidelines, including TVA-SPP-33 series, to clarify processes for project

optimization, and (b) FO&P will update portfolio management policies and procedures, including TVA-SPP-19.003, to reference the applicable processes and procedures performed by Enterprise Planning. See the Appendix for TVA management's complete response.

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

- b. Ensure economic analyses are (1) performed for all applicable projects and (2) considered in decision making.

TVA Management's Comments – TVA management stated Enterprise Planning will (a) update appropriate policies, procedures, and guidelines, including TVA-SPP-13.950, to clarify processes for performing economic analyses by different groups and (b) clarify the use of exemptions for projects. In addition, management stated FO&P will update the portfolio management policies and procedures, including TVA-SPP-19.003, to reference the applicable processes and procedures performed by Enterprise Planning. See the Appendix for TVA management's complete response.

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

- c. Provide economic analyses and all known costs to the TVA Board when presenting projects for approval.

TVA Management's Comments – TVA Management stated that in accordance with TVA Board Practice for Capital Project Approvals, the TVA Board receives updates on cost, scope and schedule of all projects exceeding \$200M through its annual budget process. Further, management stated additional project-related information is provided to the TVA Board as requested. Both Enterprise Planning and FO&P will review appropriate policies, procedures, and guidelines, including TVA-SPP-13.950 and TVA-SPP-19.003, to ensure alignment on economic analysis processes and procedures. See the Appendix for TVA management's complete response.

Auditor's Response – While we agree with TVA management's planned actions, we believe all material project-related information should be presented to the Board to add transparency to the project approval process and ensure decisions are made based on complete information.

2. We recommend the Vice President, FO&P:
 - a. Implement a reverse capital flex list for use in the event of a funding shortfall.

TVA Management's Comments – FO&P agreed to continue the use of the reverse capital flex list process as currently described and further clarify the use of management's discretion regarding this process within the Portfolio Management Guide. See the Appendix for TVA management's complete response.

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

- b. Evaluate the control gap to identify solutions to prevent the execution of purchase orders for projects that do not have all required approvals.

TVA Management's Comments – FO&P agreed to partner with Supply Chain, project managers, and other appropriate organizations to identify solutions to prevent the execution of purchase orders for projects that do not have all required approvals. See the Appendix for TVA management's complete response.

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

August 26, 2024

David P. Wheeler, WT 2C-K

RESPONSE: Draft Evaluation 2023-17461 – TVA's Portfolio Management Process

Reference: OIG Memorandum dated June 26, 2024

Thank you for the opportunity to address the recommendations from the Draft Evaluation 2023-17461 – TVA's Portfolio Management Process. Proposed actions to be taken are listed below. We would like to thank the audit team, including Lisa Hammer and Noel Kawado, for their professionalism and partnership during this audit.

Recommendation Responses:

Recommendation 1a: Ensure all projects are optimized in a consistent and holistic manner to ensure the most value to TVA ratepayers.

Response: TVA has a number of processes and procedures under the TVA-SPP-33 series that document resource planning, capacity planning, and long-term generation planning. Enterprise Planning will update appropriate policies, procedures, and guidelines, including TVA-SPP-33 series, to clarify processes for project optimization within Enterprise Planning.

Financial Operations and Performance will update the portfolio management policies and procedures, including TVA-SPP-19.003, to reference the applicable processes and procedures performed by Enterprise Planning, as noted above.

Recommendation 1b: Ensure economic analyses are (1) performed for all applicable projects and (2) considered in decision making.

Response: Enterprise Planning will update appropriate policies, procedures, and guidelines, including TVA-SPP-13.950, to clarify processes for performing economic analyses by different groups within Enterprise Planning such as Resource Strategy, Portfolio Analytics, and Enterprise Forecasting. Enterprise Planning will also clarify the use of exemptions for projects and make any appropriate changes to documentation.

Financial Operations and Performance will update the portfolio management policies and procedures, including TVA-SPP-19.003, to reference the applicable processes and procedures performed by Enterprise Planning, as noted above.

Recommendation 1c: Provide economic analysis and project costs to the TVA Board when presenting projects for approval.

Response: In accordance with the *TVA Board Practice for Capital Project Approvals*, the TVA Board receives updates on cost, scope and schedule of all projects exceeding \$200M through its annual budget process. Additional project-related information is provided to the TVA Board as requested.

Both Enterprise Planning and Financial Operations & Performance will review appropriate policies, procedures, and guidelines, including TVA-SPP-13.950 and TVA-SPP-19.003, to ensure alignment on economic analysis processes and procedures.

Recommendation 2a: Implement a reverse capital flex list for use in the event of a funding shortfall.

Response: Financial Operations and Performance agrees to continue the use of the reverse capital flex list process as currently described and further clarify the use of management's discretion regarding this process within the *Portfolio Management Guide*.

Recommendation 2b: Evaluate the control gap to identify solutions to prevent the execution of purchase orders for projects that do not have all required approvals.

Response: Financial Operations and Performance agrees to partner with Supply Chain, project managers, and other appropriate organizations to identify solutions to prevent the execution of purchase orders for projects that do not have all required approvals.

This memorandum provides actions to be taken on the noted recommendations. If you have further questions, please contact John Thomas or Rebecca Jones.



John Thomas
Executive Vice President, Chief Financial & Strategy Officer
Financial Services



Rebecca Jones
Vice President, Financial Operations & Performance
Financial Services

cc: David Fountain
Tom Rice
Brian Child
Jennifer Bryant