

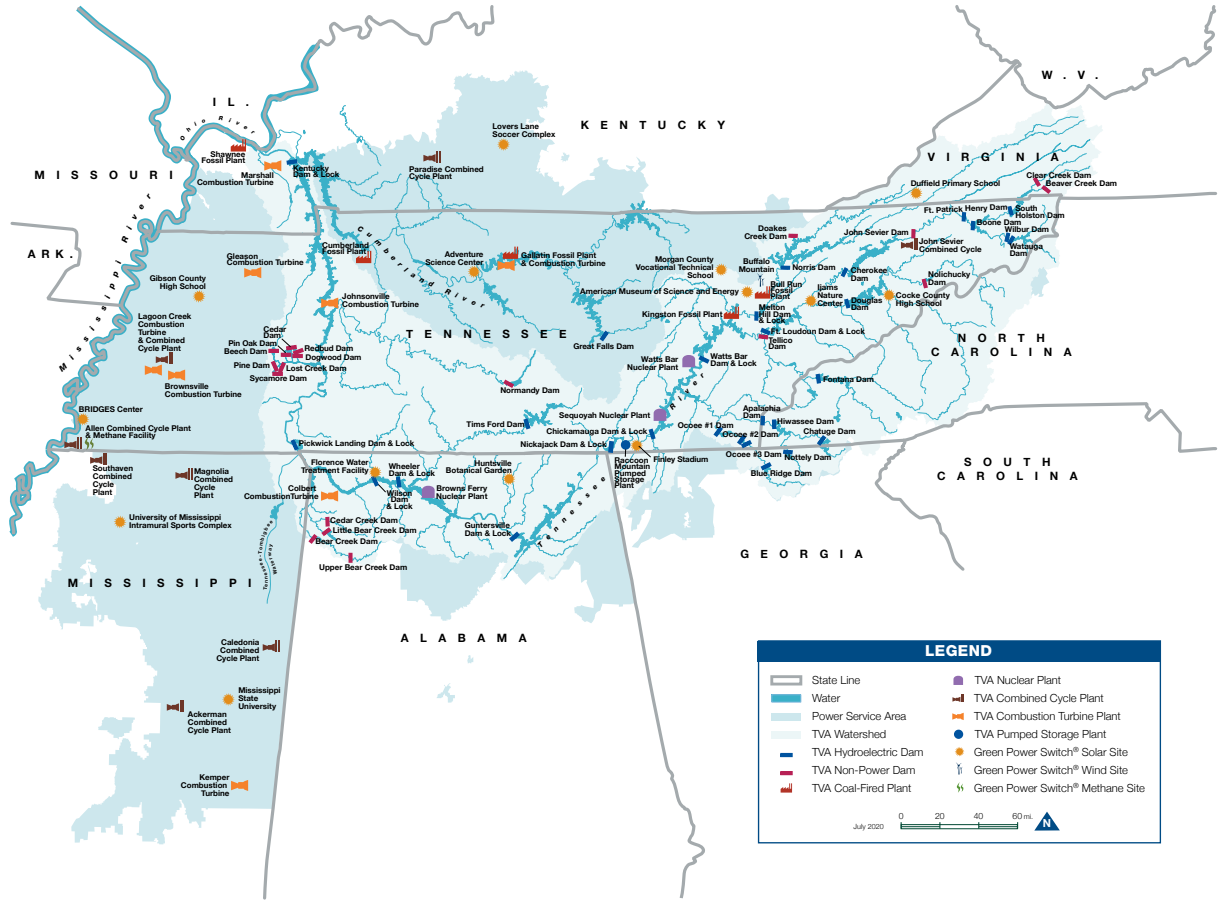


Office of the Inspector General
TENNESSEE VALLEY AUTHORITY
Semiannual Report
October 1, 2022 - March 31, 2023

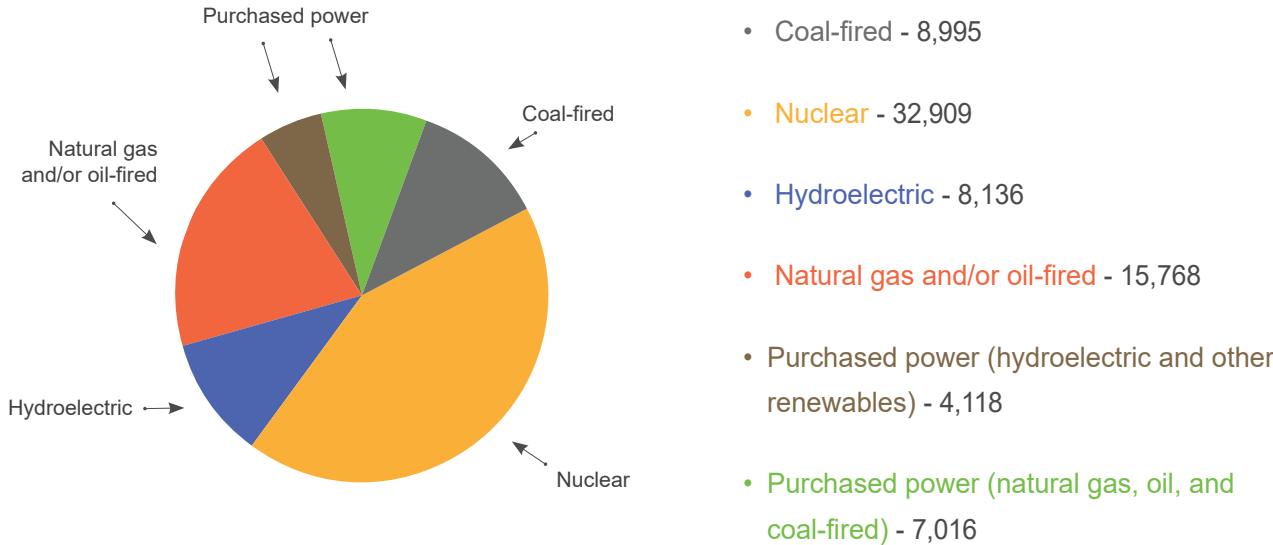


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**Total Power Supply by Generating Source
Twelve Months Ended March 31, 2023^{(1) (2)}**
(in millions of kilowatt hours)



¹ For additional detail, see TVA's 10-Q for the period ended March 31, 2023.

² Generation from TVA-owned renewable resources (nonhydroelectric) is less than one percent for the period shown and therefore is not represented in the chart above. Purchased power contains the majority of TVA's nonhydroelectric renewable energy supply.

MESSAGE FROM THE INSPECTOR GENERAL

I am pleased to present our report for the period October 1, 2022, to March 31, 2023. In this semiannual period, our audit, evaluation, and investigative activities identified more than \$41.4 million in questioned costs; funds to be put to better use; and recoveries, fees, and fines; and opportunities for Tennessee Valley Authority (TVA) to improve its programs and operations. Below are highlights of our work this period.

- Four contract compliance audits identified almost \$6.2 million in questioned costs and about \$28.9 million in potential savings opportunities.
- A preaward examination identified about \$4.4 million of potential savings opportunities for TVA to negotiate.
- An evaluation of TVA training and development processes identified opportunities to improve the effectiveness of some training processes.
- An evaluation of the inputs to the power supply plan found six of seven inputs tested were inaccurate. Although the impacts of the inaccuracies were low, the high error rate raised the risk to the integrity of the information being provided to and by TVA's Power Supply Plan.
- An audit of TVA's economic development jobs reporting process identified opportunities to improve the clarity, completeness, and presentation of the information.
- Two organizational effectiveness evaluations in the Gas and Fossil organizations identified strengths as well as risks that could, if not addressed, impact each individual business unit's ability to execute its mission.



- Our investigative results include charges filed in one criminal case, two convictions, and almost \$2 million in recoveries to TVA or other entities, fines, and fees.

In 2022, two former colleagues in the TVA Office of the Inspector General (OIG), Rick Levi and Bill Hinshaw, passed away. Rick served as Legal Counsel for almost 16 years and Bill was our second Inspector General. I was honored to work with both. They each had distinguished careers as federal servants and exemplified a strong commitment to the mission of the office and to the people of our office. I was privileged to work with them and to call them friends. We send our condolences to their families and our appreciation for their service to this country and our office.

On January 4, 2023, Beth Geer, Bobby Klein, Michelle Moore, Bill Renick, Joe Ritch, and Wade White were sworn in as members of the TVA Board of Directors (Board). We welcome the new directors and look forward to a productive working relationship with them.

On May 18, 2023, TVA will celebrate its 90th anniversary. TVA has been an integral part in transforming the Tennessee Valley from an impoverished and undeveloped region to a region that is thriving and has become a destination for people and industry. Over the years, TVA has had much success in providing reliable, low-cost energy to the residents of the Valley, harnessing the rivers for recreational and power production purposes, and bringing industry to the region.

As TVA enters its 91st year, TVA and the electric utility industry as a whole are facing some formidable challenges. According to TVA's President and Chief Executive Officer Jeff Lyash, "By 2050, we expect TVA to need half again as much energy as we supply today to support growth and electrification." TVA's Economic Development program has been very successful and is adding to forecasted demand growth in the Valley as more people and industry move to the region. In addition to meeting increasing demand, TVA has set a goal to have net-zero greenhouse gas emissions by 2050. To achieve this goal will require, among other things, technology advancements and improvements in regulatory efficiency. Finally, extreme weather events, like Winter Storm Elliott, are predicted to occur more frequently. These events serve as a reminder that while it is impossible to plan for every event that will occur, it is important that TVA learn from each one and continually reassess the pace at which generation is being retired and new generation is coming online.

As demand continues to rise in the Valley and TVA transitions away from coal generation, TVA's strategy must balance the technological viability of clean energy sources, and financial and reliability concerns. The challenge for the TVA Board and management is how to maintain a reliable electric grid during the transition. Currently, that transition strategy relies on increased natural gas generation, solar generation, and battery storage until advancements in technologies occur.

While TVA is not alone in these challenges, it is unique and well-positioned to provide a strong leadership role in developing that path. TVA has historically been known as a leader in innovation and the challenges that lie ahead will require significant technological breakthroughs. TVA is exploring numerous options to advance carbon free generation as exemplified by (1) collaborating with GE Hitachi Nuclear Energy, Ontario Power Generation, and Synthos Green Energy to advance the global deployment of small modular reactors; (2) evaluating new pumped storage sites in the Valley; and (3) adopting other renewable technologies. However, the Nation, as a whole, should recognize these challenges will require utilities, government, and regulatory authorities to work more closely together to ensure the reliability of the nation's electric grid. I believe the success of our country is dependent on having an ample supply of reliable clean energy, and it should be an all-hands on deck effort to ensure we have it.

We take seriously our role to provide the independent oversight necessary to identify risks, find opportunities for TVA to recover and save money, and improve the efficiency and effectiveness of operations while preventing and detecting fraud, waste, and abuse. We appreciate the working relationship with the TVA Board and management as we all strive to make TVA better.

A handwritten signature in black ink that reads "Ben R. Wagner". The signature is fluid and cursive.

Ben R. Wagner
Inspector General

EXECUTIVE OVERVIEW

Almost 90 years ago, President Franklin D. Roosevelt signed the TVA Act into law. Today, the Tennessee Valley is a much different place thanks, in some measure, to the hard work and innovation of TVA employees, management, and Board members. This region is growing at a rapid rate and industries are choosing to locate to the Valley, in part, due to the success of TVA in providing reliable, low-cost energy to the Valley. As TVA begins its 91st year, challenges lie ahead as demand increases and TVA strives to have net-zero greenhouse gas emissions by 2050. The mission of TVA remains steadfast and the TVA OIG remains steadfast in our mission to help TVA identify risks, find operational inefficiencies, and detect and prevent fraud, waste, and abuse for the benefit of the 10 million residents of the Tennessee Valley.

AUDITS

Our audit organization includes three departments that focus on contract audits, financial and operational audits, and information technology (IT) audits. During this reporting period, these teams completed 10 audits and examinations that identified more than \$39 million in questioned costs and funds to be put to better use.

Contract Audits

To support TVA management in negotiating procurement actions, we completed a preaward examination of a cost proposal submitted by a company proposing to provide nonnuclear modification and supplemental maintenance services to TVA. Our examination identified \$4.4 million of potential savings opportunities for TVA to negotiate. We also completed four compliance audits of contracts with expenditures totaling \$88.8 million related to (1) coal and limestone handling system support materials and/or services, (2) coal combustion residual and dam safety engineering services, (3) coal combustion residual construction services, and (4) field labor support services provided for TVA's civil construction organization. These audits identified potential overbillings and cost savings of almost \$35.1 million. The Contract Audits section begins on page 15 of this report.

Financial and Operational Audits

With a focus on financial reporting, compliance with applicable laws and regulations, and TVA operations, we completed audits of TVA's economic development jobs reporting, consulting contracts, and employee relocation allowances. In addition to our audit work, we monitored the audit of TVA's Fiscal Year (FY) 2022 financial statements by an external auditor and applied agreed-upon procedures related to TVA's 2022 Winning Performance (WP) measures. The Financial and Operational Audits section begins on page 17 of this report.

IT Audits

IT Audits completed an audit of TVA's substation physical security. The IT Audits section begins on page 19 of this report.



Lagoon Creek Gas Plant

EVALUATIONS

Our Evaluations organization includes two groups, one of which focuses on organizational effectiveness reviews. During this reporting period, our teams completed three evaluations and two organizational effectiveness reviews, which identified a number of opportunities for improvement.

Evaluations

The Evaluations group completed three evaluations during this semiannual period. These included evaluations of TVA's Power Supply Plan, identification of enterprise risks, and training and development processes. The Evaluations section begins on page 20 of this report.

Organizational Effectiveness

This group completed evaluations of two TVA organizations to identify factors that could impact their organizational effectiveness. The organizational effectiveness reviews included evaluations of Ackerman Combined Cycle Plant and Kingston Fossil Plant. The Organizational Effectiveness section begins on page 23 of this report.

INVESTIGATIONS

During this reporting period, we opened 62 cases and closed 59. Our investigations have resulted in significant civil, criminal, and administrative outcomes. The Investigations section begins on page 24 of this report.

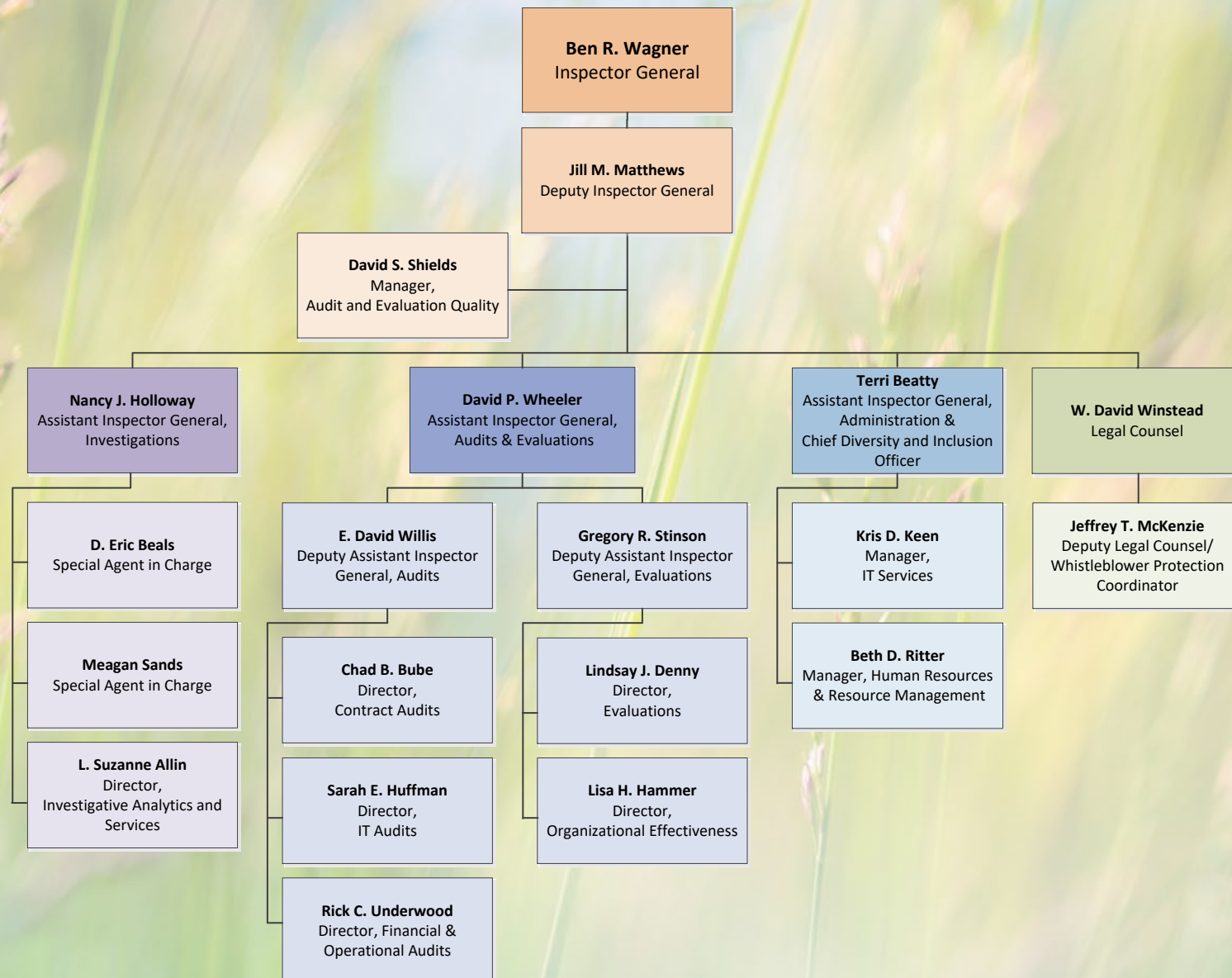
STATISTICAL HIGHLIGHTS

October 1, 2022 - March 31, 2023

Audit Reports Issued	10
Evaluations Completed	5
Questioned Costs	\$6,176,928
Questioned Costs Agreed to by TVA	\$6,176,928
Questioned Costs Recovered by TVA	\$1,550,267
Funds to be Put to Better Use	\$33,282,362
Savings Realized by TVA	\$20,100,000
Investigations Opened	62
Investigations Closed	59
Recoveries/Fees	\$1,960,394
Criminal Actions	3
Administrative Actions (Number of Subjects)	4

ORGANIZATION

Since 1985, the OIG has worked to help TVA become better. Through our audits, evaluations, and investigations, we provide TVA management, the TVA Board, and Congress with an independent look at the economy, efficiency, and effectiveness of TVA programs and help prevent and detect fraud, waste, and abuse. Over the years, the OIG has helped TVA save or recover millions of dollars and recommended numerous program improvements. We credit our success to the efforts of our hardworking and talented staff and the professional responsiveness of TVA management to our recommendations.



TVA OIG OFFICE LOCATIONS

The OIG has a work philosophy of being in the right place at the right time to do the best work possible. We support that philosophy by encouraging our OIG employees to work where they can be most effective whether that is in one of our physical offices, in the field, or in one of our virtual offices that enable our employees to telework from home or while traveling.

The OIG has strategically located its offices within the Tennessee Valley. We are headquartered in TVA's Knoxville Office Complex overlooking the downtown area. The OIG has field offices in Chattanooga, Tennessee, where members of Evaluations, Organizational Effectiveness, and Financial and Operational Audits departments and several special agents are located. Special agents are also located in Nashville, Tennessee, and Huntsville, Alabama. Additionally, we have office locations at Watts Bar Nuclear Plant in Spring City, Tennessee, and Sequoyah Nuclear Plant in Soddy Daisy, Tennessee. Staff work in these locations as needed. As of March 31, 2023, the OIG had a total staff of 100 employees.

ADMINISTRATION

The Administration team works closely with the IG, Deputy IG, and Assistant IGs to support the day-to-day operations of the OIG and to develop policies and procedures designed to drive and enhance productivity, quality, and compliance, and achieve office goals. Responsibilities include personnel administration, budget and financial management, purchasing and contract services, facilities coordination, training-event coordination, strategic planning, communications facilitation, and IT support.

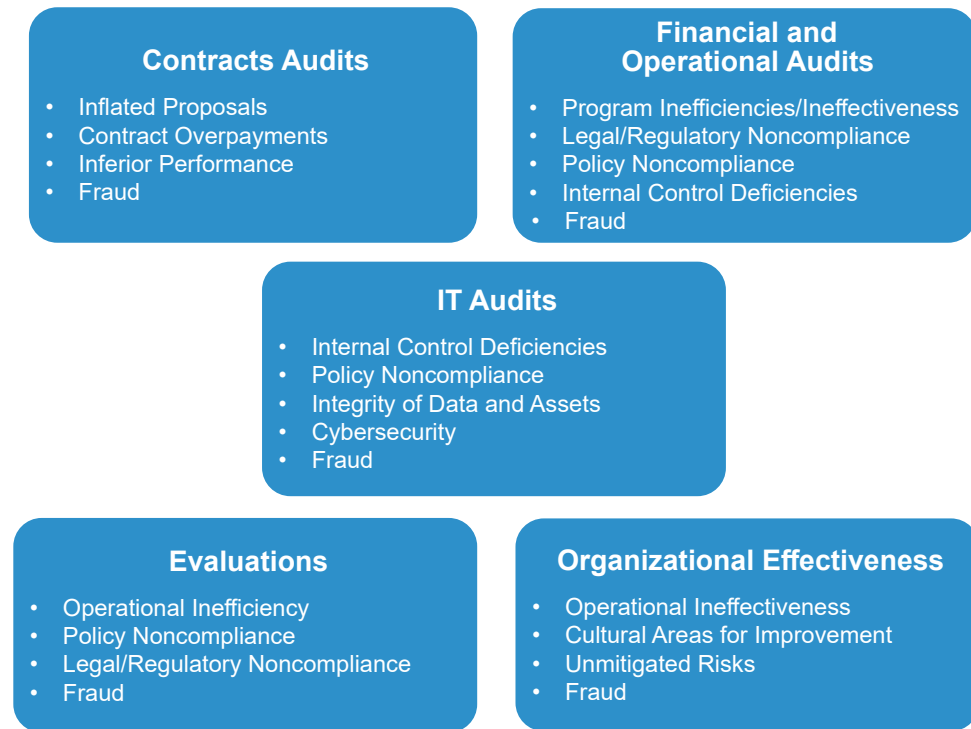
AUDITS AND EVALUATIONS

The Audits and Evaluations teams perform a wide variety of engagements designed to promote positive change and provide assurance to TVA stakeholders. Based upon the results of these engagements, the Audits and Evaluations organizations make recommendations to enhance the effectiveness and efficiency of TVA programs and operations.

The organizations use an impact- and risk-based approach to develop an annual work plan. In developing the plan, the OIG considers TVA's strategic plans, major management challenges, TVA's enterprise risk management process, and other input from TVA management. This planning model also evaluates each potential engagement from the standpoint of materiality (i.e., costs or value of assets), potential impact, sensitivity (including public and congressional interest), and the likelihood it will result in recommendations for cost savings, recovery of dollars, or process improvements. The result of the OIG Audits and Evaluations planning process is a focus on the issues of highest impact and risk to TVA.

These issues vary depending on the objectives of the project. The graphic on page 12 shows some representative examples of issues our audit and evaluation projects are commonly designed to identify.

TYPES OF AUDIT & EVALUATION ISSUES



The Audits team conducts performance audits of TVA programs and operations, providing an inclusive picture of TVA's overall fiscal and operational health. The organization is made up of three departments—Contract Audits, Financial and Operational Audits, and IT Audits. The Audits organization performs its work in accordance with *Government Auditing Standards*.

- Contract Audits has lead responsibility for contract compliance audits and preaward examinations. In addition, this department performs audits of TVA contracting processes and provides claims assistance as well as litigation support.
- Financial and Operational Audits is responsible for performing audit work mandated by legislation, agreed-upon procedures, as well as risk-based audits associated with TVA financial and operational activities. The work stems largely from mandated activities, review of TVA's business-risk environment, consideration of emerging issues, and requests. This department also provides oversight of the TVA external auditor's compliance with professional standards.

- IT Audits has lead responsibility for audits relating to the security of TVA's IT infrastructure, application controls, and general controls associated with TVA systems. This department also performs operational audits of the effectiveness of IT-related functions.

The Evaluations team assesses both operational and cultural aspects of programs and departments throughout TVA to ensure objectives and operational functions are achieved effectively and efficiently. This organization is made up of two departments—Evaluations and Organizational Effectiveness. This organization performs its work in accordance with *Quality Standards for Inspection and Evaluation* as prescribed by the Council of the Inspectors General on Integrity and Efficiency (CIGIE).

- Evaluations performs both comprehensive reviews and more limited-scope policy and program reviews to monitor compliance and assess the efficiency and effectiveness of operations.
- Organizational Effectiveness performs risk-based reviews to assess factors that could impact an organization's ability to achieve its mission and goals.

INVESTIGATIONS

The Investigations team focuses on proactive and reactive efforts to uncover fraud, waste, and abuse in TVA programs and operations. This organization performs its investigations in accordance with the *Quality Standards for Investigations* as prescribed by CIGIE, applicable U.S. Attorney General Guidelines, and other guiding documents. OIG special agents maintain liaisons with federal and state prosecutors and notify the U.S. Department of Justice whenever the OIG has reason to believe there has been a violation of federal criminal law. Special agents partner with other investigative agencies and organizations on special projects and assignments, including interagency law enforcement task forces on terrorism, the environment, health care, and public corruption. The graphic shows the major categories of investigations.

LEGAL

The OIG Legal Counsel team monitors existing and proposed legislation and regulations that relate to the mandate, operations, and programs of the OIG and TVA. Additionally, this team provides legal advice as needed for administrative, audit, evaluation, and investigative projects. OIG attorneys serve as ethics officials, providing OIG employees guidance on government ethics and standards of conduct. The TVA Whistleblower Protection Coordinator is also a part of this team and provides information regarding the statutory protections against retaliation for all TVA employees.

MAJOR CATEGORIES OF INVESTIGATIONS



SUMMARY OF REPRESENTATIVE AUDITS

During this semiannual reporting period, the TVA OIG audit organization completed ten audits and examinations. This work identified more than \$39 million in questioned costs for TVA to recover and funds to be put to better use. We also identified several opportunities for TVA to improve the effectiveness and efficiency of its programs and operations.

CONTRACT AUDITS

Preaward Contract Examinations

To support TVA management in negotiating procurement actions, we completed a preaward examination of a cost proposal submitted by a company proposing to provide nonnuclear modification and supplemental maintenance services to TVA. Our examination identified \$4.4 million of potential savings opportunities for TVA to negotiate. The savings opportunities were primarily related to overstated indirect cost recovery rates.

Contract Compliance Reviews

During this semiannual period, we completed four compliance audits of contracts with expenditures totaling \$88.8 million. These audits identified potential overbillings and cost savings of almost \$35.1 million. Highlights of our completed compliance audits follow.

- We audited \$10.3 million in costs billed by a contractor for providing coal and limestone handling system support materials and/or services at various TVA fossil plants. In summary, we determined the contractor overbilled TVA \$139,132, including (1) \$104,012 in ineligible and unsupported material and equipment costs, (2) \$32,564 in ineligible and unsupported labor costs, and (3) \$2,556 in unsupported per diem costs. We also noted several opportunities to improve contract administration by TVA. Specifically, we found (1) the contract contained language requiring subcontractor approval that does not match TVA's intent, (2) the contractor began work on two purchase orders prior to approval by TVA, and (3) the contractor did not provide a proper invoice to TVA as required by the contract.

TVA management agreed with our recommendations to (1) recover \$139,132 in overbilled costs and (2) revise contract language to reflect TVA's intent for approval of subcontractor costs. In addition, TVA management stated they would (1) discuss with business partners and the contractor about unauthorized procurements and ensure proper controls are in place to prevent work from being performed prior to approval by TVA and (2) discuss the requirement to provide a proper invoice for all future billings to TVA with the contractor.

- We audited \$11.3 million in costs billed by a contractor for coal combustion residual and dam safety engineering services. The contract provided for TVA to compensate the contractor for work on either a cost-reimbursable, target cost estimate, time and material (T&M), unit rate, or fixed price basis. Our audit objectives were to determine if (1) costs were billed in accordance with the terms of the contract and (2) tasks were issued using the most cost-efficient pricing methodology. Over 97 percent of the costs billed during our audit scope were billed using T&M compensation terms. In summary, we determined:
 - The contractor overbilled TVA \$317,583, including (1) \$304,690 for an ineligible fee applied to T&M labor rates, (2) \$10,576 for labor billing rate errors, and (3) a net \$2,317 for overbilled other direct costs. We also found the contract's compensation terms did not reference the contract's rate attachment for equipment and specialized computer applications or specify when the rate attachment was to be used.

- The use of T&M pricing terms on projects caused TVA to pay about \$822,869 more than it would have if cost-reimbursable payment terms had been used for those projects. Additionally, if TVA utilized cost-reimbursable pricing for the remaining contract spend, they could potentially avoid \$192,362 in future costs.

TVA management agreed with our recommendations to (1) recover \$317,583 in overbilled costs and (2) revise the contract's compensation terms to clarify use of the rate attachment specific to equipment and specialized computer applications. In addition, TVA management stated they would continue to work with business partners to assess the most appropriate commercial approach for each project.

- We audited \$47.9 million in costs billed by a contractor for coal combustion residual construction services. This included approximately \$42.5 million for fixed price projects, \$5.3 million for cost-reimbursable projects, and \$89,985 for T&M projects. Our audit objectives were to determine if (1) costs were billed in accordance with the terms of the contract and (2) tasks were issued using the most cost-efficient pricing methodology. In summary, we determined:
 - The contractor overbilled TVA \$80,324, including (1) \$48,183 for overbilled labor costs, (2) \$23,383 for duplicate material costs, (3) \$7,758 for ineligible equipment costs, and (4) \$1,000 for ineligible insurance costs.
 - The use of fixed price payment terms on projects caused TVA to pay at least \$4.4 million more than it would have if cost-reimbursable payment terms had been used for those projects. Additionally, if TVA utilized cost-reimbursable pricing for the remaining contract spend, it could potentially avoid \$28.7 million in future costs.

TVA management agreed with our recommendation to recover \$80,324 in overbilled costs. In addition, TVA management stated they would continue to work with business partners to assess the most appropriate commercial approach for each project.

- We audited \$19.3 million in costs billed by a contractor for field labor support services provided for TVA's civil construction organization. In summary, we determined the contractor billed TVA:
 - From \$116,763 to \$421,683 in unapproved temporary living allowance (TLA) costs. In addition, we identified other areas where the administration of TLA and TLA certifications could be improved.
 - \$44,941 in other ineligible and unsupported costs, including (1) \$21,582 for ineligible and unapproved subcontractor costs, (2) \$11,269 for ineligible equipment costs, (3) \$8,845 for duplicate and ineligible material costs, and (4) \$3,245 for unsupported noncraft labor costs.

We also noted opportunities to improve contract administration by TVA. Specifically, (1) the contract contained inconsistent language related to compensating noncraft labor and (2) several invoice and payment errors resulted in incorrect payments by TVA, which could have been identified with a proper invoice review.

TVA management agreed with our recommendations to (1) determine if the \$421,683 in TLA costs were eligible for reimbursement and take action to recover the costs if they are deemed ineligible and (2) recover the remaining \$44,941 in overbilled costs. In addition, TVA management stated they would (1) review the contract for inconsistent compensation terms and determine if updates are needed and (2) work with the business partner to address invoice and payment errors identified.

FINANCIAL AND OPERATIONAL AUDITS

During this semiannual period, Financial and Operational Audits completed audits of TVA's economic development jobs reporting, consulting contracts, and employee relocation allowances. In addition to our audit work, we monitored the audit of TVA's FY 2022 financial statements by an external auditor and applied agreed-upon procedures related to TVA's 2022 WP measures.

Economic Development Jobs Reporting

The TVA Act of 1933 outlines TVA's responsibility for the advancement of the economic development of the area in which it conducts its operations. The Economic Development (ED) organization serves as TVA's primary liaison with stakeholders, including, but not limited to, state, regional, and local economic development staffers, distributors, and direct-served customers, as it relates to economic development. The ED organization is primarily responsible for helping to maintain TVA's industrial and manufacturing base, locate desirable companies to the Tennessee Valley, and improve the competitiveness of Valley communities.

TVA ED offers incentive programs and services to new and existing customers in the Valley. TVA included information on jobs created and retained in the Valley for which TVA has played a role in the recruitment or retention of the economic development project in their FY 2019 through 2021 Securities and Exchange Commission reports and FY 2020 Sustainability Report. Additionally, jobs created and/or retained are used as a metric in the corporate multiplier for the Winning Performance Team Incentive Plan (WPTIP) and the Executive Annual Incentive Plan (EAIP).

Based on the reputational risk of disseminating inaccurate information to the public, we included an audit of TVA ED jobs reporting in our annual audit plan. Our audit objective was to determine if the job numbers reported externally by TVA ED are validated prior to being disseminated to the public in accordance with any best practices.

We found TVA ED has a monthly process in place to review job number forecasts prior to reporting the numbers externally and that the number of jobs reported generally agreed with supporting documentation. However, we found the information presented to the public by TVA related to job creation and retention is not always clear, complete, or presented in the proper context as required by the TVA Information Quality Guidelines. Specifically, we found (1) TVA lacks policies and procedures for determining how jobs created and retained should be counted, (2) jobs created and/or retained shown in TVA's annual report are reported as if the jobs were created and/or retained during the current FY rather than as forecast jobs to be created or retained in the future, and (3) TVA ED reports jobs created and retained numbers in aggregate and doing so fails to provide the proper context for the number of new jobs actually created. In addition, we found companies' forecasts of jobs created were sometimes inaccurate.

TVA management provided actions TVA plans to take to improve the accuracy, clarity, completeness, reliability, and context of information presented to the public by TVA related to job creation and retention as required by the TVA Information Quality Guidelines.

Consulting Contracts

We included an audit of TVA consulting contracts in our annual audit plan due to significant spend in this area as well as the conflict of interest risks associated with this type of contract. Our audit objective was to determine if proper controls are in place to identify consulting contracts at TVA and limit the risks of conflicts of interest. Our audit scope included TVA consulting contracts with expenditures during the period October 1, 2017, through February 28, 2022.

We found TVA's controls for identifying consulting contracts and limiting the risks of conflicts of interest were not operating effectively. In addition, we found the organizational conflict of interest (OCI) and Business Ethics and Compliance Requirements clauses that should be included in all TVA contracts are not consistently

incorporated into consulting contracts. We also found no guidance for TVA Supply Chain personnel and suppliers that addressed (1) how to identify actual or potential OCIs or (2) how these OCIs are to be mitigated, resolved, or avoided during contract performance.

We made four recommendations to TVA management to strengthen controls for identifying consulting contracts at TVA and limiting and mitigating the risks of conflicts of interest associated with those contracts. TVA management provided actions TVA plans to take to address each of our recommendations.



Employee Relocation Allowances

TVA may reimburse moving and associated travel expenses for (1) employees who accept other TVA positions that require they relocate or (2) new appointees as determined by management. We included an audit of TVA's employee relocation allowances on our annual audit plan due to the potential reputational and financial risks associated with relocations that do not comply with TVA policies and procedures.

Our audit objective was to determine if relocation allowances are paid in accordance with TVA Standard Programs and Processes (SPP) 11.208, *Employee Relocation Allowances*. Our audit scope included 308 completed employee relocations during calendar years 2019 through 2021, totaling approximately \$8.4 million. TVA utilizes a third-party vendor, SIRVA Relocation, LLC (SIRVA) to interface with the employee and administer the relocation. SIRVA is required to administer each relocation in accordance with TVA's policies, and TVA retains authority for review and approval of any requested policy exceptions.

We found employee relocations were generally paid in accordance with TVA-SPP-11.208 and the management review control for payment of these transactions was operating effectively. However, we identified an opportunity to improve the relocation process and instances where program guidance could be clarified. Specifically, we found (1) SIRVA's review of miscellaneous expense allowance claims was not documented consistently, (2) program guidance for some employee relocations could be improved, (3) program guidance for manager and specialist new hires is unclear, and (4) program guidance for temporary living allowances incorrectly references the Federal Travel Regulation.

We made four recommendations to TVA management, including one to improve the relocation process and three to update TVA-SPP-11.208. TVA management agreed with our recommendations and provided actions TVA plans to take to address each of them.

Oversight of the FY 2022 Financial Statement Audit

TVA contracted with the independent public accounting firm of Ernst & Young LLP to audit TVA's consolidated balance sheet as of September 30, 2022, and the related consolidated statements of operations, comprehensive income (loss), changes in proprietary capital, and cash flows for the year then ended. This also included the audit of TVA's internal control over financial reporting as of FY-end. Additionally, the firm also reviewed TVA's FY 2022 interim financial information filed on Form 10-Q with the Securities and Exchange Commission. The contract required the work be performed in accordance with *Government Auditing Standards*. Our monitoring of their work disclosed no instances where the firm did not comply, in all material respects, with these standards.

Agreed-Upon Procedures for TVA FY 2022 Performance Measures

TVA's WP Incentive Plan is a performance management program designed to promote teamwork, focus on continued high performance, and motivate and reward employees for achieving strategic objectives and critical success factors. We applied agreed-upon procedures requested and agreed to by TVA management solely to assist management in determining the validity of the WPTIP and EAIP measures for FY 2022.

TVA management is responsible for the WP measures data provided. In summary, we found:

- The FY 2022 WP goals for the Enterprise measures were properly approved. There was one change form that affected one measure.
- The FY 2022 goals (target) for the corporate multiplier measures were properly approved.

- The actual FY to-date results for the Enterprise measures agreed with the underlying support, without exception.
- The actual FY to-date results for the corporate multiplier measures agreed with the underlying support, without exception.
- The FY 2022 WP payout percentage provided by the Benchmarking and Enterprise Performance organization on November 9, 2022, was mathematically accurate and agreed with the OIG's recalculation.

IT AUDITS

During this semiannual period, IT Audits completed an audit of TVA's substation physical security.

Substation Physical Security

Substations provide crucial links for power generation and serve as key nodes for linking transmission and distribution networks to end-use customers. Physical access controls at TVA substations reduce the risk of electric power disruption events within the transmission system, including those with network connectivity. Due to the risk of potential threats against substations with network connectivity, we conducted an audit to determine if substations had appropriate physical access controls. Our scope included substations that contained devices with TVA network connectivity.

We found substations had overall appropriate physical access controls. However, we identified control weaknesses in TVA's annual access review process and management of one of the physical access controls. Additionally, we determined TVA's applicable SPP should be revised to define requirements for physical access reviews. TVA management agreed with our recommendations to (1) remediate identified control weaknesses and (2) review TVA SPP requirements for physical access reviews and update accordingly.

SUMMARY OF REPRESENTATIVE EVALUATIONS

During this reporting period, our teams completed three evaluations and two organizational effectiveness reviews, which identified a number of opportunities for improvement.

EVALUATIONS

Evaluations performs both comprehensive reviews and more limited-scope policy and program reviews to monitor compliance and assess the efficiency and effectiveness of operations. During this semiannual reporting period, the Evaluations department completed three evaluations, including reviews of TVA's (1) power supply plan, (2) identification of enterprise risks, and (3) training and development processes.

Power Supply Plan

TVA's Enterprise Planning organization engages in long-term generation and capacity planning to support TVA's mission of providing low-cost, reliable electricity. TVA's capacity plan is designed to ensure resource adequacy while working to minimize cost to customers and develop a long-term strategy for the TVA power system. Long-term generation planning allows for the optimal use of available resources to meet the future energy needs across TVA's service area, factoring in operating area and system constraints. Collectively, the capacity and generation plans are referred to as the Power Supply Plan. Due to the importance of power supply planning to TVA's fuel cost forecasting and operational decision-making, we conducted an evaluation to determine whether TVA is using accurate inputs to develop the Power Supply Plan.

We tested seven inputs to the Power Supply Plan, including two key inputs, and determined six were inaccurate. Specifically, we found errors in the (1) fuel costs, (2) load forecast, (3) Southeastern Power Administration hydro generation forecast, (4) solar purchased power agreement contract terms, (5) coal ancillary services, and (6) demand response capacities and costs. We also noted an opportunity for improvement related to the level of detail contained in the documentation available to guide the load forecasting process.

Due to the complex nature of TVA's power supply planning models and forecasting methodologies, we were unable to determine the overall impact of the errors identified on the Power Supply Plan. While the impacts we were able to quantify were low, having errors in six of seven inputs we reviewed indicates there could be risk to the integrity of information being provided to and by TVA's Power Supply Plan. Additionally, various personnel raised concerns regarding the reliability of information being provided by TVA's Power Supply Plan, specifically in the burn forecast. TVA management agreed with our recommendations to correct errors and address deficiencies identified and implement controls to prevent recurrence. TVA management provided ongoing, completed, or planned actions to address the recommendations.

Identification of TVA's Enterprise Risks

Enterprise Risk Management (ERM) provides an enterprise-wide, strategically aligned portfolio view of organizational challenges that provides improved insight about how to more effectively prioritize and manage risks. The TVA Board established a formalized ERM program in 1999 to (1) develop a standard framework and (2) promote risk management awareness and techniques to manage risks throughout the company. Due to the importance of TVA identifying and assessing risks, we evaluated (1) the process used by TVA business units (BU) to identify risks and (2) how BU risks were used to comprise TVA's enterprise risk levels.

We determined the processes used by TVA were generally effective for identifying strategic business unit (SBU)/BU risks and assessing those risks to determine enterprise level risks. Specifically, we determined (1) the process used by SBUs/BUs to identify and assess risks generally aligned with ERM guidance, (2) TVA's risks generally aligned with risks identified by industry peers, and (3) changes to Enterprise Risk Category rankings and significant changes to SBU/BU risk assessments were reasonable.

While the processes used by TVA for identifying and assessing risks were generally effective, we identified some opportunities for improvement related to documentation of the ERM process and defining and documenting TVA's risk appetite.¹ Fully documenting TVA's ERM process and formally defining its risk appetite could help ensure that TVA's framework for managing risk is clearly understood and implemented. Additionally, we could not determine if the risks in the 2022 Enterprise Level Risk Portfolio adequately addressed the rolling blackouts that occurred on December 23 and 24, 2022. ERM personnel indicated the risk coverage will be evaluated after TVA has completed its assessment of the causes of the event. TVA management agreed with two of our three recommendations and provided ongoing or planned actions to address (1) documenting the process used to identify and assess risks, (2) adjusting the procedure to include that the risk appetite is informally discussed with risk owners, and (3) evaluating whether the inability to meet demand were adequately covered in the risk portfolio. In addition, TVA management indicated there was not a procedural requirement to formally define and document TVA's risk appetite.

TVA Training and Development Processes

The Government Accountability Office defines training as educational programs of instruction in professional, technical, or other fields that are, or will be, related to the employee's job responsibilities. TVA's Regulatory and Corporate Training and Support organization aims to (1) create and maintain safety and environmental training that ensures employees are trained to regulatory requirements, (2) support the job assessment process to ensure employees are assigned the training they need to perform their jobs, and (3) create and support the corporate and technical training that enables individual professional and technical development.

Due to the importance of training and development programs in contributing to improved organizational performance and enhanced employee skills and competencies, we conducted an evaluation of TVA's training and development processes. We found the process for identifying training needs was generally effective; however, we found some of TVA's training processes were not effective and needed improvement. Specifically, we found (1) not all individuals were assigned the appropriate training and (2) the effectiveness of training was not always being measured. TVA management agreed with our recommendations and provided planned or completed actions to (1) confirm training assignment discrepancies have been corrected, (2) complete implementation of training system correction, and (3) perform evaluation process steps in alignment with procedure.

ORGANIZATIONAL EFFECTIVENESS

During this semiannual reporting period, the Organizational Effectiveness group completed evaluations of two TVA organizations to identify factors that could impact their organizational effectiveness. The organizational effectiveness evaluations included Ackerman Combined Cycle Plant and Kingston Fossil Plant.

Ackerman Combined Cycle Plant

Ackerman Combined Cycle Plant (AKC), located in Ackerman, Mississippi, was built in 2007 and acquired by TVA on April 14, 2015. The plant has two gas turbines and one steam turbine, which allows for greater transmission flexibility and improved reliability for the region. AKC is an intermediate generation asset (between base load and peak load assets)² and is capable of producing 705 megawatts of electricity, enough to power more than 400,000 homes.

AKC plant personnel informed us the culture at the plant was generally positive due to strong engagement between team members and with plant management. However, plant personnel also indicated concerns with (1) the plant's grounding process, (2) work management, and (3) a valve that was not operating properly. Management subsequently addressed the valve concern.

TVA management agreed with our recommendations to (1) complete plans to address safety concerns related to AKC's grounding process and (2) address concerns related to work management.

Kingston Fossil Plant

Kingston Fossil Plant (KIF) is one of five remaining fossil plants within TVA's coal fleet, and the nine-unit, coal-fired steam generating plant has a summer net capability of 1,398 megawatts. TVA has proposed closing KIF no later than 2033. However, KIF's closure is contingent upon approval by TVA's Board and completion of environmental reviews pursuant to the National Environmental Policy Act, which includes an evaluation of replacement options with other generation. TVA is currently preparing an environmental impact statement (EIS) to identify various alternatives for the KIF site. In the interim, TVA has proposed to retire three units as early as 2026, but no later than 2031, and the remaining six units as early as 2027, but no later than 2033. In addition, one alternative considered in its EIS is to continue to operate KIF with needed upgrades to meet regulatory requirements. Plant closures and potential plant closures pose unique organizational effectiveness risks, such as operational challenges due to aging assets and the instability of the workforce due to the proposed closure.

During our evaluation, we identified positive interactions with management and between coworkers, although behavioral concerns regarding a few coworkers were identified. In addition, plant personnel expressed concerns regarding (1) condition of assets, (2) staffing challenges, and (3) communication related to the future of KIF. TVA management agreed with our recommendations to (1) evaluate the risks resulting from degraded asset condition and mitigate the risks as necessary; (2) determine if further actions could be taken to alleviate staffing concerns, and implement as necessary; (3) address communication concerns related to KIF's future; and (4) work with Human Resources to address identified behavior issues.

¹ The risk appetite is the broad-based amount of risk an organization is willing to accept in pursuit of its mission/vision.

² Base load is the minimum amount of electric power delivered or required over a given period of time at a steady rate. Peak load is the maximum load during a specified period of time.

SUMMARY OF REPRESENTATIVE INVESTIGATIONS

During this reporting period, we opened 62 cases and closed 59. Our investigations have resulted in significant civil, criminal, and administrative outcomes. Highlights of investigative accomplishments follow.

Investigation Results in \$1.45 Million Civil Settlement

NGK Insulators, Ltd. (NGK) is a Japanese company whose product lines include polymer and porcelain insulators for use on electric transmission power lines and in substations. Between 1990 and 2017, TVA purchased 1,758,127 insulators from NGK. In 2018, information came to light that NGK falsified testing reports and repeatedly failed to conduct quality conformance testing on the insulators in accordance with the required American National Standards Institute standards as identified in their TVA contract. Further, the insulators were subjected to only NGK's internal testing process. TVA stopped purchasing insulators from NGK during the 2017 timeframe.

Based on the OIG investigation into this matter, a settlement agreement was reached on October 18, 2022, between TVA, the U.S. Attorney's Office, and NGK whereby NGK will pay to the United States \$1,450,000, half of which, \$725,000, consists of restitution to TVA; an additional \$41,241 is designated to cover TVA OIG's investigative costs; and \$683,759, a "double-damages" penalty, is to be paid to the U.S Treasury. The United States contends that it has certain civil claims against NGK arising from NGK's failure to perform required production tests on the insulators prior to their shipment to TVA and/or NGK's false certifications to TVA that NGK completed such testing through at least 2017.

Investigation Finds Utility Employees Provided False Information to TVA's EnergyRight® Program

A community utility's EnergyRight® program documentation indicated possible fraud. A subsequent TVA OIG investigation revealed the EnergyRight® program tracking system was being improperly used so that the utility was able to receive payments to which it was not entitled. Our investigation revealed numerous water heaters were inaccurately entered into the EnergyRight® program rebate system as being installed by Quality Contract Network (QCN) vendors. These heaters were actually installed by other vendors and/or the property owner. Two of the utility's employees responsible for home inspections uploaded false information into the EnergyRight® program database. QCN vendors provided their usernames and passwords to the two utility employees, who were then able to log in with the QCN vendors' identities, indicating qualified personnel had installed the water heaters in accordance with guidelines. Based on this activity, the QCN vendors made \$40 for each water heater they did not install, and the utility was paid \$225 for each one as well – all under the EnergyRight® program. Our findings were referred to the U.S. Attorney's Office, which declined prosecution in favor of administrative remedies available to TVA.

TVA management contacted the utility with our findings, requesting the utility reimburse the EnergyRight® program in the amount of \$69,625, which it has since done. TVA OIG has been apprised that the two utility employees have been disciplined for their activities as well.



Former Public Utility General Manager Sentenced for Bribery Related to Federal Funds

On September 2, 2022, an Information was filed in federal court charging Bruce L. Purdy, then North Alabama Electric Cooperative's (NAEC) General Manager, with one count of Theft or Bribery Concerning Programs Receiving Federal Funds. The Information alleged that Mr. Purdy accepted a thing of value from a person, intending to be influenced and rewarded in connection with a transaction and series of transactions of NAEC involving \$5,000 or more. On October 6, he pled guilty to the Information.

On January 12, 2023, Mr. Purdy was sentenced to 26 months in prison, followed by two years of supervised release. He was additionally ordered to pay \$135,000 restitution to NAEC and a \$95,000 fine.

Investigation Results in Recovery of Over \$200,000

A vendor has held a long-term, \$25 million contract with TVA for Valleywide performance, development, execution, and management of solid waste disposal and solid waste diversion services for TVA. An investigation was opened based on questions regarding the vendor's billing practices.

The investigation analyzed 2,254 invoices submitted by this vendor and identified \$160,099 in overbillings. The primary categories identified as being overbilled were: multiple haul fees of the same container on the same day, container rental fees, delivery fees, haul fees, relocation fees, excess site time fees, fuel recovery fees, legislative fees, lock charges, container swap fees, state tax, liner fees, service attempts, and container removal fees. During May 2019, TVA received a credit from the vendor for relocation fees and fuel recovery fees.

After calculating the credit already received by TVA, the investigation revealed TVA was overbilled an additional \$74,932. An extrapolation calculation was conducted identifying \$129,865 in potential overbillings, in addition to the \$74,932 identified in the invoice review, for a total potential overbilling of \$204,797.

On March 30, 2023, TVA completed the recovery of \$204,797 via offset credits from the vendor based on TVA OIG findings of overpayments made to the vendor. This matter was declined for prosecution by the U.S. Attorney's Office.

Executive Order Implementation - Equipment Acquisition, Training Completion, and Continued Compliance Tools - for TVA OIG Special Agents

On May 25, 2022, President Joseph R. Biden, Jr., signed the Executive Order on Advancing Effective, Accountable Policing and Criminal Justice Practices to Enhance Public Trust and Public Safety. The Executive Order, combined with two directives issued by the U.S. Attorney General, required federal law enforcement agencies to make some significant updates to restrict the use of chokeholds and carotid restraints by its agents, for agents to exercise an affirmative duty to intervene when an agent observes another law enforcement officer exercising excessive force or violating the rights of another person, and to emphasize that agents are to render aid and request medical assistance when appropriate. Additionally, TVA OIG's use of force policy now includes a requirement that agents receive training in de-escalation tactics to be utilized before using force when possible. Finally, TVA OIG's policy on the use of no-knock warrants was formalized to reflect the Attorney General's policy that the tactic is used only upon preapproval of a judge or magistrate and when there is an imminent threat to physical safety.

Also in response to the Executive Order and another directive from the Attorney General, TVA OIG developed, and fully implemented, a body-worn camera program. This required TVA OIG to identify and evaluate products and vendors to find the most effective and cost efficient option. TVA OIG acquired a contract which included equipment, an evidence management system, and vendor-conducted

training for its agents. A policy was also created directing the proper use of the new system and management of the resulting evidence. Full implementation was realized during October 2022, with the completion of training by all TVA OIG agents. At the time of adoption, TVA OIG was one of the first OIGs to have a full body-worn camera program implemented.



Kingston Fossil Plant

LEGISLATION AND REGULATIONS

In this section of our semiannual report, it is our intent to address only current and pending legislation which relates to the economy or efficiency of TVA operations when we have recommendations or comments to make to Congress regarding the legislation. At times, we may direct recommendations to general positions and issues, particularly when there are multiple bills dealing with the issue. At other times, we anticipate making recommendations relating to particular statutes and bills and their particular wording.

During this reporting period, we are not making any recommendations to Congress regarding current or pending legislation.



IN MEMORIAM

Two former TVA OIG family members passed away in 2022. We pause to remember them and acknowledge their impact to our office.

We honor our retired colleague, Rick Levi, who passed away on May 17, 2022. Rick shared his legal expertise as a trusted public servant during his 34 year career with Nuclear Regulatory Commission, TVA OIG, and retired public service with General Services Administration OIG in 2015.

During Rick's 18 years at TVA OIG, 16 years as our Legal Counsel, he was known for his impeccable judgement, genius, and integrity. We remember him as a tremendous teacher who acted with kindness and was a positive influence for our office.



Rick Levi



William L. Hinshaw II

We honor former Inspector General William L. Hinshaw II, who passed away November 9, 2022. Bill began public service in the United States Army, then transitioned to the Federal Bureau of Investigation for 24 years before he served as TVA OIG's second Inspector General from 1992 to 1994. Bill then joined Science Applications International Corporation and ended his career as an entrepreneur with his wife as a home builder in 2007.

Over the nearly two years as the TVA OIG Inspector General, Bill was known for his focus on relationship building and continuous improvement. We remember him as a caring leader who challenged us to be the best we could be, made time to connect and listen, and celebrated team contributions and successes.

Their legacies will always be a part of our TVA OIG story
and they remain part of our family.

INDEX OF REPORTING REQUIREMENTS UNDER THE INSPECTOR GENERAL ACT

REPORTING	REQUIREMENT	PAGE OR APPENDIX
Section 4(a)(2)	Review of legislation and regulations.	28-29
Section 5(a)(1)	Description of significant problems, abuses, and deficiencies relating to the administration of programs and operations of the establishment and associated reports and recommendations for corrective action made by the Office of the Inspector General.	14-27
Section 5(a)(2)	Identification of each recommendation made before the reporting period, for which corrective action has not been completed, including the potential costs savings associated with the recommendation.	Appendix 3
Section 5(a)(3)	Summary of significant investigations closed during the reporting period.	24-27
Section 5(a)(4)	Identification of the total number of convictions during the reporting period resulting from investigations.	Appendix 4
Section 5(a)(5)	Information regarding each audit, inspection, or evaluation report issued during the reporting period, including (a) a listing of each audit, inspection, or evaluation; (b) if applicable, the total dollar value of questioned costs (including a separate category for the dollar value of unsupported costs) and the dollar value of recommendations that funds be put to better use, including whether a management decision had been made by the end of the reporting period.	Appendix 2
Section 5(a)(6)	Information regarding any management decision made during the period with respect to any audit, inspection, or evaluation issued during a previous reporting period.	Appendix 3
Section 5(a)(7)	Information described under Section 804(b) of the Federal Financial Management Improvement Act of 1996.	Not Applicable
Section 5(a)(8)	Appendix containing the results of any peer review conducted by another Office of the Inspector General during the reporting period; or if no peer review was conducted within that reporting period, a statement identifying the date of the last peer review conducted by another Office of the Inspector General.	Appendix 7
Section 5(a)(9)	List of any outstanding recommendations from any peer review conducted by another Office of the Inspector General that have not been fully implemented, including a statement describing the status of the implementation and why implementation is not complete.	None
Section 5(a)(10)	List of any peer reviews conducted of another Office of the Inspector General during the reporting period, including a list of any outstanding recommendations made from any previous peer review (including any peer review conducted before the reporting period) that remain outstanding or have not been fully implemented.	Appendix 8
Section 5(a)(11)	Statistical table showing (a) the total number of investigative reports issued during the reporting period; (b) the total number of persons referred to the Department of Justice for criminal prosecution during the reporting period; (c) the total number of persons referred to state and local prosecuting authorities for criminal prosecution during the reporting period; and (d) the total number of indictments and criminal informations during the reporting period that resulted from any prior referral to prosecuting authorities.	Appendix 4

APPENDIX 1

INDEX OF REPORTING REQUIREMENTS UNDER THE INSPECTOR GENERAL ACT (CONTINUED)

REPORTING	REQUIREMENT	PAGE OR APPENDIX
Section 5(a)(12)	Description of the metrics used for developing the data for the statistical tables under Section 5(a)(17).	Appendix 4
Section 5(a)(13)	Report on each investigation conducted by the Office where allegations of misconduct were substantiated involving a senior government employee ¹ or senior official (as defined by the Office) if the establishment does not have senior government employees.	None
Section 5(a)(14)	Detailed description of (a) any instance of whistleblower retaliation, including information about the official found to have engaged in retaliation; and (b) what, if any, consequences the establishment actually imposed to hold the official accountable.	None
Section 5(a)(15)	Information related to interference by the establishment, including (a) a detailed description of any attempt by the establishment to interfere with the independence of the Office, including (i) with budget constraints designed to limit the capabilities of the Office, and (ii) incidents where the establishment has resisted or objected to oversight activities of the Office or restricted or significantly delayed access to information, including the justification of the establishment for such action; and (b) a summary of each report made to the head of the establishment under Section 6(c)(2) during the reporting period.	None
Section 5(a)(16)	Detailed descriptions of the particular circumstances of each (a) inspection, evaluation, and audit conducted by the Office that is closed and was not disclosed to the public; and (b) investigation conducted by the Office involving a senior government employee that is closed and was not disclosed to the public.	None

¹ Pursuant to Section 5(a)(13) of the IG Act, as amended, which gives discretion to the OIG to make determinations where an Agency does not have "Senior Government employees," senior managers are those categorized as Officer/Executive in the TVA pay bands and others by exception, based on their responsibilities.

APPENDIX 2

OIG AUDIT REPORTS • ISSUED DURING THE SIX-MONTH PERIOD ENDED MARCH 31, 2023

Report Number and Date	Title	Questioned Costs	Unsupported Costs	Funds Put To Better Use
CONTRACT AUDITS				
2022-17341 11/16/2022	Slick Rollers, LLC - Contract No. 14457	\$139,132	\$19,646	\$0
2022-17379 12/02/2022	Geosyntec Consultants, Inc. - Contract No. 13125	1,140,452	0	192,362
2022-17351 01/19/2023	Fisher Contracting Company - Contract No. 13155	4,430,720	6,516	28,700,000
2021-17300 02/01/2023	Baker's Construction Services, Inc. - Contract No. 14743	466,624	3,245	0
2022-17393 ¹ 03/30/2023	Proposal for Nonnuclear Modification and Supplemental Maintenance Services	0	0	4,390,000
FINANCIAL AND OPERATIONAL AUDITS				
2022-17397 11/15/2022	Agreed-Upon Procedures for TVA Fiscal Year 2022 Performance Measures	\$0	\$0	\$0
2022-17352 11/16/2022	Economic Development Jobs Reporting	0	0	0
2022-17347 12/02/2022	Consulting Contracts	0	0	0
2022-17348 12/13/2022	Employee Relocation Allowances	0	0	0
INFORMATION TECHNOLOGY AUDITS				
2020-15708 02/21/2023	Substation Physical Security	\$0	\$0	\$0
TOTAL AUDITS (10)		\$6,176,928	\$29,407	\$33,282,362

¹ Management decision was not received by the end of the reporting period.

OIG EVALUATION REPORTS • ISSUED DURING THE SIX-MONTH PERIOD ENDED MARCH 31, 2023
(CONTINUED)

Report Number and Date	Title	Questioned Costs	Unsupported Costs	Funds Put To Better Use
EVALUATIONS				
2020-15747 10/24/2022	Power Supply Plan	\$0	\$0	\$0
2022-17375 03/30/2023	TVA Training and Development Processes	0	0	0
2022-17381 ² 03/31/2023	Identification of TVA's Enterprise Risks	0	0	0
ORGANIZATIONAL EFFECTIVENESS				
2022-17335 10/06/2022	Organizational Effectiveness - Kingston Fossil Plant	\$0	\$0	\$0
2022-17336 10/26/2022	Organizational Effectiveness - Ackerman Combined Cycle	0	0	0
TOTAL EVALUATIONS (5)		\$0	\$0	\$0

Note: A summary of or link to the full report may be found on the OIG's Web site at <https://oig.tva.gov>.

² Management decision was not received by the end of the reporting period.

RECOMMENDATIONS INCLUDED IN A PREVIOUS SEMIANNUAL REPORT AND AWAITING IMPLEMENTATION

At the end of the semiannual period, final corrective action was not complete on 55 recommendations associated with 8 audit and 10 evaluation reports issued in a prior period. Presented below for each audit and evaluation are the report number, date, and title, along with a brief description of action management agreed to take to resolve the open recommendation, including the date management expects to complete final action. (Report numbers followed by an "*" indicates management decision was received during this semiannual period.)

Audit Report Number and Date	Report Title and Actions Agreed to by Management to Resolve Recommendations
	Voith Hydro, Inc. - Contract No. 9000
2021-15786 04/22/2022	TVA agreed to (1) work with Voith Hydro, Inc., to determine if \$2,435,353 in billed labor rates were eligible for reimbursement and incorporate any labor rates that are acceptable into the contract via an amendment and (2) pursue recovery of \$12,606 in overbilled costs due to ineligible rate adjustments. TVA expects to complete final action by April 22, 2023.
	Outside Employment Related to Small Business Administration Loans
2021-17277 05/04/2022	TVA agreed to (1) implement measures to help ensure Form 15570, Request for Approval of Outside Employment or Consulting Work, is updated as required; (2) send an automated outside employment Form 15570 to anyone whose financial disclosure report shows outside employment; (3) clarify roles and responsibilities related to the Form 15570 review process; and (4) automate the Form 15570 approval process. TVA expects to complete final action by April 30, 2023.
	Non-Power Dam Control System Cybersecurity
2022-17340 06/01/2022	TVA agreed to (1) work with the software vendor to update or replace the current software version to achieve compliance with current cyber security standards and (2) incorporate the supervisory control and data acquisition system in the River Forecasting System Security Plan. TVA expects to complete final action by May 27, 2023.
	Williams Plant Services, LLC - Contract No. 10728
2020-15770 06/03/2022	TVA agreed to negotiate with Williams to recover (a) \$22,081 in unsupported labor costs, including markup; (b) \$7,759 in ineligible overtime costs; (c) \$14,209 in ineligible and misclassified material and supply costs; (d) \$359,753 in unapproved subcontractor costs if TVA determines they were ineligible for reimbursement; (e) \$27,806 in excessive markups and \$2,996 in ineligible fees for fitness for duty background investigations; (f) \$99,950 in excessive temporary living allowance costs; (g) \$3,622 in ineligible travel costs; and (h) \$3,508 in labor costs associated with ineligible travel costs. TVA also agreed to (1) verify labor rate schedules are accurate prior to incorporating them into new contract amendments; (2) develop controls to reinforce invoice payments under the correct contract; and (3) determine which modifications are needed to revise contract compensation terms for nonmanual labor. TVA expects to complete final action by June 3, 2023.
	IT Equipment Inventory
2022-17343 07/06/2022	As a part of the IT Asset Management Project, TVA agreed to update applicable policies, procedures, and work practices related to (1) deployment and tracking, (2) shared assets, (3) reconciliation of assets without assigned owners, and (4) automated reconciliation. TVA expects to complete final action by June 30, 2023.
	Endpoint Protection
2022-17338 07/27/2022	TVA agreed to update policy and procedures for endpoint protection. TVA expects to complete final action by May 31, 2023.
	Back-to-Business Credit Program
2022-17346 09/14/2022	TVA agreed to test the Back-to-Business credits in fiscal year 2023 to ensure credits were passed through to end-use customers on all local power companies not previously reviewed. TVA expects to complete final action by September 14, 2023.

RECOMMENDATIONS INCLUDED IN A PREVIOUS SEMIANNUAL REPORT AND AWAITING IMPLEMENTATION (CONTINUED)

Audit Report Number and Date	Report Title and Actions Agreed to by Management to Resolve Recommendations
2022-17370* 09/19/2022	<p>2022 Federal Information Security Modernization Act</p> <p>TVA agreed to (1) ensure (a) contingency plans are consistently tested as required by policy and (b) the configuration management process is consistently implemented for all information systems; (2) review and update existing policy and procedures to reflect the new enclave approach; (3) create processes to maintain a complete and accurate inventory of hardware assets connected to the corporate network; and (4) create processes to develop and maintain a complete and accurate inventory of (a) software assets and (b) software assets connected to the corporate network. TVA expects to complete final action by December 30, 2023.</p>
2021-15789 03/24/2022	<p>Acquisition and Disposal of Real Property</p> <p>TVA agreed to review, update, and publish the Real Property Standard Programs and Processes and user guides. TVA expects to complete final action by December 31, 2023.</p>
2022-17335 04/14/2022	<p>Organizational Effectiveness - Allen Integrated Site</p> <p>TVA agreed to complete fire alarm system repairs. TVA expects to complete final action by April 14, 2023.</p>
2021-17252 05/25/2022	<p>Organizational Effectiveness - Browns Ferry Radiation Protection</p> <p>TVA agreed to (1) improve communications within the Radiation Protection (RP) department regarding the facts used to make decisions and why the approach was chosen; (2) discuss the importance of being an operationally focused organization with the RP department; (3) develop and implement standard meeting agendas for department daily briefings and weekly staff meetings to ensure alignment across the RP groups; (4) improve RP department integration into the workweek scheduling process to allow improved communications and expectations with other organizations with respect to support of workweek activities; (5) develop a communication strategy to educate the workforce on RP stop work criteria and its importance; and (6) evaluate the oversight process for nuclear safety culture to identify any gaps and required corrective actions. TVA expects to complete final action by May 25, 2023.</p>
2021-17297 06/10/2022	<p>TVA Nuclear Radiation Dosage</p> <p>TVA agreed to (1) verify that dosimetry investigations and subsequent dosimetry investigation reports are completed in accordance with procedure and (2) perform a touchpoint verification at each station after each monitoring period to ensure that dosimetry investigation reports are identified and completed as required. TVA expects to complete final action by June 9, 2023.</p>
2021-17270 07/13/2022	<p>Groundwater at TVA Nuclear Plants</p> <p>TVA agreed to complete actions to address long-standing American Nuclear Insurers recommendations. TVA expects to complete final action by October 1, 2023.</p>

RECOMMENDATIONS INCLUDED IN A PREVIOUS SEMIANNUAL REPORT AND AWAITING IMPLEMENTATION (CONTINUED)

Evaluation Report Number and Date	Report Title and Actions Agreed to by Management to Resolve Recommendations
2021-17275* 07/15/2022	<p>Organizational Effectiveness - Communications & Public Relations</p> <p>TVA agreed to (1) proactively communicate the organizational structure, capabilities, and products/services to strategic business units across the enterprise; (2) improve role clarity and specific accountability requirements; (3) take actions to address staffing issues and concerns; (4) build engagement through transparency and timeliness in all team communications and interactions and return to regular all-hands meetings and to host a series of culture building, department-wide sessions; (5) take actions to improve leadership communications and utilize cross-functional teams to collaborate on projects and initiatives; and (6) address a perceived lack of organizational direction. TVA expects to complete final action by July 17, 2023.</p>
2021-17315* 08/26/2022	<p>TVA's Capacity to Meet Energy Demand</p> <p>TVA agreed to (1) implement multiple levels of review to prevent capacity related reporting errors; (2) continue to iteratively update power supply plans and restore the system to reserve margin targets as quickly and cost-effectively as possible; and (3) consider data governance improvements and more clearly document the capacity process. TVA expects to complete final action by August 26, 2023.</p>
2021-17298* 09/01/2022	<p>Respiratory Protection Program</p> <p>TVA agreed to (1) reinforce the requirements and ensure respirators are stored in accordance with TVA's Technical Safety Procedure, Respiratory Protection, and (2) improve tools available for supervisors to provide oversight of employee Respiratory Protection Program training, fit tests, and medical evaluations. TVA expects to complete final action by August 4, 2023.</p>
2022-17354* 09/02/2022	<p>Organizational Effectiveness - Bull Run Fossil Plant</p> <p>TVA agreed to (1) continue onsite support to the remainder of the Coal Fleet as plants near retirement and Power Operations will work with Human Resources leadership to define durations and timing of when onsite support is needed as plant closures near retirement dates; (2) assess site training programs content for retiring coal sites to determine opportunities to improve site-specific plant knowledge; (3) continue to establish budget needs (based on material condition risks) of retiring coal plants and appropriately plan and fund operations and maintenance and capital investments needed to ensure safety and compliance while meeting the respective site/unit reliability mission; and (4) provide fire brigade training to all new TVA annual operations employees and leverage the International Brotherhood of Electrical Workers Memorandum of Understanding to provide a stipend for fire brigade members to maintain qualifications. TVA expects to complete final action by September 1, 2023.</p>
2021-17261 09/29/2022	<p>Evaluation of New Technologies</p> <p>TVA agreed to (1) refine and/or develop policies and procedures clarifying roles, responsibilities, and accountabilities around new technology development; (2) select an appropriate technology maturity valuation methodology; (3) work with the Enterprise Content Management team to define official research and development documentation and develop a clear procedure on where documents are housed and made available; and (4) formalize an enterprise-wide stage gate framework for development, demonstration, planning, design, construction, and implementation of new technologies. TVA expects to complete final action by August 22, 2023.</p>

INVESTIGATIVE REFERRALS AND PROSECUTIVE RESULTS

Referrals	
Reports Issued to TVA Management	6
Subjects Referred to U.S. Attorneys	20
Subjects Referred to State/Local Authorities	0
Results	
Subjects Indicted/Informations Filed	1
Subjects Convicted	2
Pretrial Diversions	0
Federal Referrals Declined	12
State/Local Referrals Declined	0

Metrics: Reports issued to TVA management are comprised of formal written reports and, when appropriate, e-mailed summaries conveying the findings of a completed investigation.

The number of indictments does not include sealed indictments or superseding indictments of the same individual already reported in this or a prior semiannual report unless charges or charging mechanism differs substantially.

Results include persons and companies/entities as applicable, and may include task force activities and joint investigations with other agencies.

HIGHLIGHTS - STATISTICS

	MAR 31, 2023	SEPT 30, 2022	MAR 31, 2022	SEPT 30, 2021	MAR 31, 2021
AUDITS					
AUDIT STATISTICS					
Carried Forward	16	18 ¹	20	20	15
Started	14	11	12	14	14
Canceled	(0) ²	(2)	(0) ³	(2)	(0) ⁴
Completed	(10)	(13)	(13)	(12)	(8)
In Progress at End of Reporting Period	18	16	18	20	20
AUDIT RESULTS (Thousands)					
Questioned Costs	\$6,177	\$3,012	\$1,630	\$13,458	\$23
Disallowed by TVA	\$6,177	\$3,012	\$1,630	\$8,425	\$23
Recovered by TVA	\$1,550	\$316	\$102	\$395	\$607 ⁵
Funds to Be Put to Better Use	\$33,282	\$139,418	\$6,483	\$9,700	\$3,455
Agreed to by TVA	\$48,992 ⁶	\$125,801	\$0	\$9,700	\$17,135 ⁷
Realized by TVA	\$20,100	\$8,201	\$0	\$2,240	\$5,779
OTHER AUDIT-RELATED PROJECTS					
Completed	4	5	5	8	6
Cost Savings Identified/Realized	\$0	\$0	\$292	\$0	\$0
EVALUATIONS					
Completed	5	10	7	13	7
Cost Savings Identified/Realized (Thousands)	\$0	\$0	\$0	\$0	\$0
SPECIAL PROJECTS					
Completed	0	0	0	0	1
INVESTIGATIONS*					
INVESTIGATION CASELOAD					
Opened	62	79	79	74	75
Closed	59	79	79	83	90
In Progress at End of Reporting Period	73 ⁹	73	73	73 ¹⁰	87
INVESTIGATIVE RESULTS (Thousands)					
Recoveries	\$1,860.3 ¹¹	\$1,596.4 ¹²	\$447.4	\$7,357.7 ¹³	\$2,056.1
Projected Savings	\$0	\$0	\$63.1	\$0	\$1,144.1
Fines/Penalties/Fees	\$100.1	\$1.5	\$175.4	\$0.6	\$0.3
Waste/Other Monetary Loss	\$0	\$0	\$506.2	\$2,887.0	\$429.4
Forfeiture(s) Ordered - Criminal	\$0	\$1,000	\$0	\$1,750.0	\$0
Forfeiture(s) Ordered - Civil	\$0	\$134.1	\$0	\$0	\$0
MANAGEMENT ACTIONS					
Disciplinary Actions Taken (Number of Subjects)	4	6	4	4	9
Counseling/Management Techniques Employed (Number of Cases)	8	9	12	11	13
Debarments	0	1	0	0	0
PROSECUTIVE ACTIVITIES (Number of Subjects)					
Referred to U.S. Attorneys	20	10	6	11	4
Referred to State/Local Authorities	0	0	0	5	0
Indicted/Informations Filed	1	4	2	7	1
Convicted	2	3	2	1	1
Pretrial Diversions	0	0	1	0	1

¹ Does not include two projects that were postponed at the beginning of the period.

² Two projects were postponed during the period.

³ One project was postponed during the period.

⁴ Ibid.

⁵ Includes amounts agreed to in a prior period.

⁶ Includes amounts identified in a prior period.

⁷ Ibid.

⁸ These numbers may include task force activities and joint investigations with other agencies.

⁹ Adjusted from previous period.

¹⁰ Ibid.

¹¹ Of this amount, \$818,759 was recovered for other entities as a result of our investigations.

¹² Of this amount, \$1,248,300 was restitution ordered to a general public entity as a result of a criminal TVA OIG investigation.

¹³ Includes \$6,775,896 court-ordered restitution to other federal and state entities resulting from a multi-agency investigation.

GOVERNMENT CONTRACTOR AUDIT FINDINGS

The National Defense Authorization Act for Fiscal Year 2008, P.L. 110-181, requires each Inspector General appointed under the Inspector General Act of 1978 to submit an appendix on final, completed contract audit reports issued to the contracting activity that contain significant audit findings—unsupported, questioned, or disallowed costs in an amount in excess of \$10 million, or other significant findings—as part of the Semiannual Report to Congress. During this reporting period, the Office of the Inspector General issued no contract review reports under this requirement.



PEER REVIEWS OF THE TVA OIG

Audits Peer Review

Inspector General audit organizations are required to undergo an external peer review of their system of quality control at least once every three years, based on requirements in the *Government Auditing Standards*. Federal audit organizations can receive a rating of pass, pass with deficiencies, or fail. The Tennessee Valley Authority (TVA) Office of the Inspector General (OIG) underwent its most recent peer review of its audit organization for the period ended September 30, 2022. This review was performed by the U.S. Securities and Exchange Commission (SEC) OIG. The SEC OIG issued its report, dated February 28, 2023, in which it concluded the system of quality control for the audit organization of TVA OIG in effect for the year ended September 30, 2022, has been suitably designed and complied with to provide TVA OIG with reasonable assurance of performing and reporting in conformity with applicable professional auditing standards in all material respects. Accordingly, the TVA OIG received a rating of pass. There are no outstanding recommendations from this review. The peer review report is posted on our Web site at https://oig.tva.gov/peer_reports.html.

Evaluations Peer Review

Inspector General organizations that conduct evaluations in accordance with the Council of the Inspectors General on Integrity and Efficiency's *Quality Standards for Inspection and Evaluation* (Blue Book) are required to undergo an external peer review every three years. In 2020, the TVA OIG underwent its first peer review of its evaluation organization. The peer review covered the period ended December 31, 2019, and was led by the Department of Labor OIG. The Department of Labor OIG issued its report, dated May 28, 2020, in which it determined the (1) TVA OIG's internal policies and procedures generally met the seven Blue Book standards addressed in the peer review and (2) TVA OIG reports reviewed met the covered Blue Book standards and complied with TVA OIG's internal policies and procedures. The peer review report is posted on our Web site at https://oig.tva.gov/peer_reports.html.

The U.S. Department of Housing and Urban Development OIG is currently performing a peer review of our evaluations organization for the period ended March 31, 2023. We plan to include the results of the ongoing peer review in our next semiannual report.

Investigations Peer Review

Investigative Operations undergoes a Quality Assessment Review at least once every three years. The Corporation for National & Community Service (CNCS) OIG completed a Quality Assessment Review of TVA OIG Investigative Operations on May 31, 2019. CNCS OIG found "...the system of internal safeguards and management procedures for the investigative function of TVA-OIG in effect for the period ending December 31, 2018, was in compliance with the quality standards established by CIGIE and the applicable Attorney General guidelines..." This confirmation is posted on our Web site at https://oig.tva.gov/reports/2019_Investigations_Peer_Review.pdf.

APPENDIX 8

PEER REVIEW OF OTHER OIG

TVA OIG Investigations completed a peer review of Investigative Operations of the U.S. Office of Personnel Management (OPM) during this semiannual period. We issued our final report to the OPM Inspector General on January 19, 2023. As part of this process, we reviewed the organization's internal safeguards and management procedures in effect for the period ending October 31, 2022, and found the organization in conformity with the *Quality Standards for Investigations* and the Qualitative Assessment Review Guidelines established by the Council of the Inspectors General on Integrity and Efficiency and the Attorney General Guidelines for the Office of Inspectors General with Statutory Law Enforcement Authority, as applicable. OPM OIG has posted the peer review report on their Web site at <https://www.oversight.gov/sites/default/files/oig-reports/OPM/Final-Report-TVA-OIG-QAR.pdf>.



Browns Ferry Nuclear Plant

GLOSSARY

Disallowed Cost

A questioned cost that management, in a management decision, has sustained or agreed should not be charged to the agency.

Final Action

The completion of all management actions, as described in a management decision, with respect to audit findings and recommendations. When management concludes no action is necessary, final action occurs when a management decision is made.

Funds To Be Put To Better Use

Funds which the OIG has disclosed in an audit report that could be used more efficiently by reducing outlays, deobligating program or operational funds, avoiding unnecessary expenditures, or taking other efficiency measures.

Information

A formal accusation of a crime made by a prosecuting officer as distinguished from an indictment presented by a grand jury.

Management Decision

Evaluation by management of the audit findings and recommendations and the issuance of a final decision by management concerning its response to such findings and recommendations.

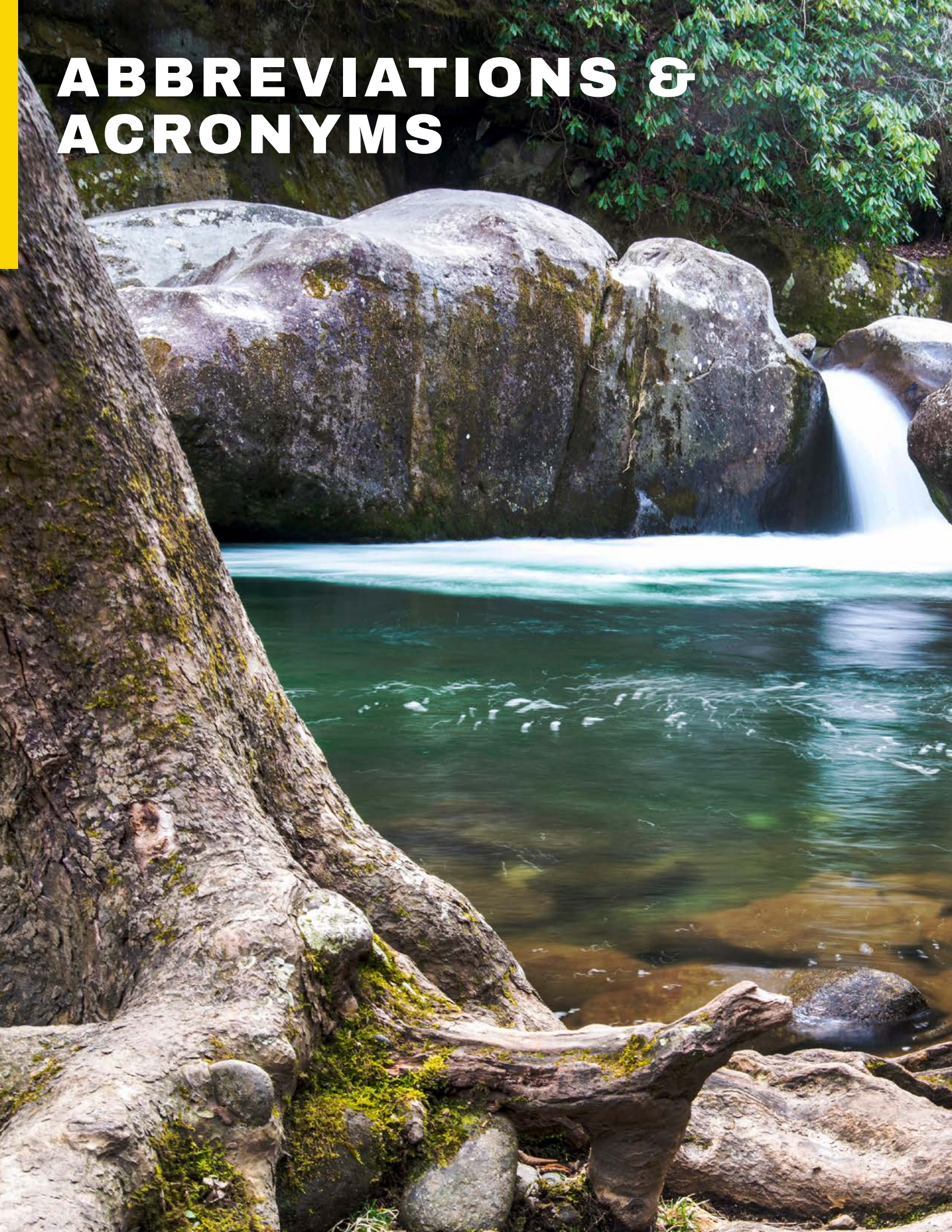
Questioned Cost

A cost the Inspector General questions because (1) of an alleged violation of a law, regulation, contract, grant, cooperative agreement, or other document governing the expenditure of funds; (2) such cost is not supported by adequate documentation; or (3) the expenditure of funds for the intended purposes was unnecessary or unreasonable.

Unsupported Cost

A cost that is questioned because of the lack of adequate documentation at the time of the audit.

ABBREVIATIONS & ACRONYMS



THE FOLLOWING ARE ACRONYMS AND ABBREVIATIONS WIDELY USED IN THIS REPORT.

AKC	Ackerman Combined Cycle Plant
Blue Book	Quality Standards for Inspection and Evaluation
Board	Board of Directors
BU	Business Units
CIGIE	Council of the Inspectors General on Integrity and Efficiency
CNCS	Corporation for National & Community Service
EAIP	Executive Annual Incentive Plan
ED	Economic Development
EIS	Environmental Impact Statement
ERM	Enterprise Risk Management
FY	Fiscal Year
IG	Inspector General
IT	Information Technology
KIF	Kingston Fossil Plant
NAEC	North Alabama Electric Cooperative
NGK	NGK Insulators, Ltd.
OCI	Organizational Conflict of Interest
OIG	Office of the Inspector General
OPM	U.S. Office of Personnel Management
QCN	Quality Contract Network
RP	Radiation Protection
SBU	Strategic Business Unit
SEC	U.S. Securities and Exchange Commission
SIRVA	SIRVA Relocation, LLC
SPP	Standard Programs and Processes
T&M	Time and Material
TLA	Temporary Living Allowance
TVA	Tennessee Valley Authority
Valley	Tennessee Valley
WP	Winning Performance
WPTIP	Winning Performance Team Incentive Plan



Office of the Inspector General

400 West Summit Hill Drive
Knoxville, Tennessee 37902

The OIG is an independent organization charged with conducting audits, evaluations, and investigations relating to TVA programs and operations, while keeping the TVA Board and Congress fully and currently informed about problems and deficiencies relating to the administration of such programs and operations.

The OIG focuses on (1) making TVA's programs and operations more effective and efficient; (2) preventing, identifying, and eliminating waste, fraud, and abuse and violations of laws, rules, or regulations; and (3) promoting integrity in financial reporting.

If you would like to report to the OIG any concerns about fraud, waste, or abuse involving TVA programs or violations of TVA's Code of Conduct, you should contact the OIG EmPowerline, TVA OIG's hotline. The EmPowerline can be reached 24 hours a day, seven days a week, either by a toll-free phone call (1-855-882-8585) or over the Web (www.oigempowerline.com). A third-party contractor will take your call or online concern and immediately forward it to OIG personnel. You may report your concerns anonymously or you may request confidentiality.



EmPowerline[®]

**A hotline for reporting anonymous
and confidential concerns**

www.oigempowerline.com

Toll-Free 855-882-8585



**We investigate fraud, waste, and abuse in TVA programs and operations.
Examples include:**

- Contract Fraud
- Environmental Crimes
- Healthcare/Prescription Drug Fraud
- Employee Misconduct
- Conflict of Interest
- Workers' Compensation Fraud

Whistleblower Protection

Educates TVA employees about prohibitions on retaliation for protected disclosures, as well as the rights and remedies of employees who have been subjected to workplace retaliation for making protected disclosures. E-mails may be directed to: whistleblowercoordinator@tvaig.gov.



TVA OIG VALUES

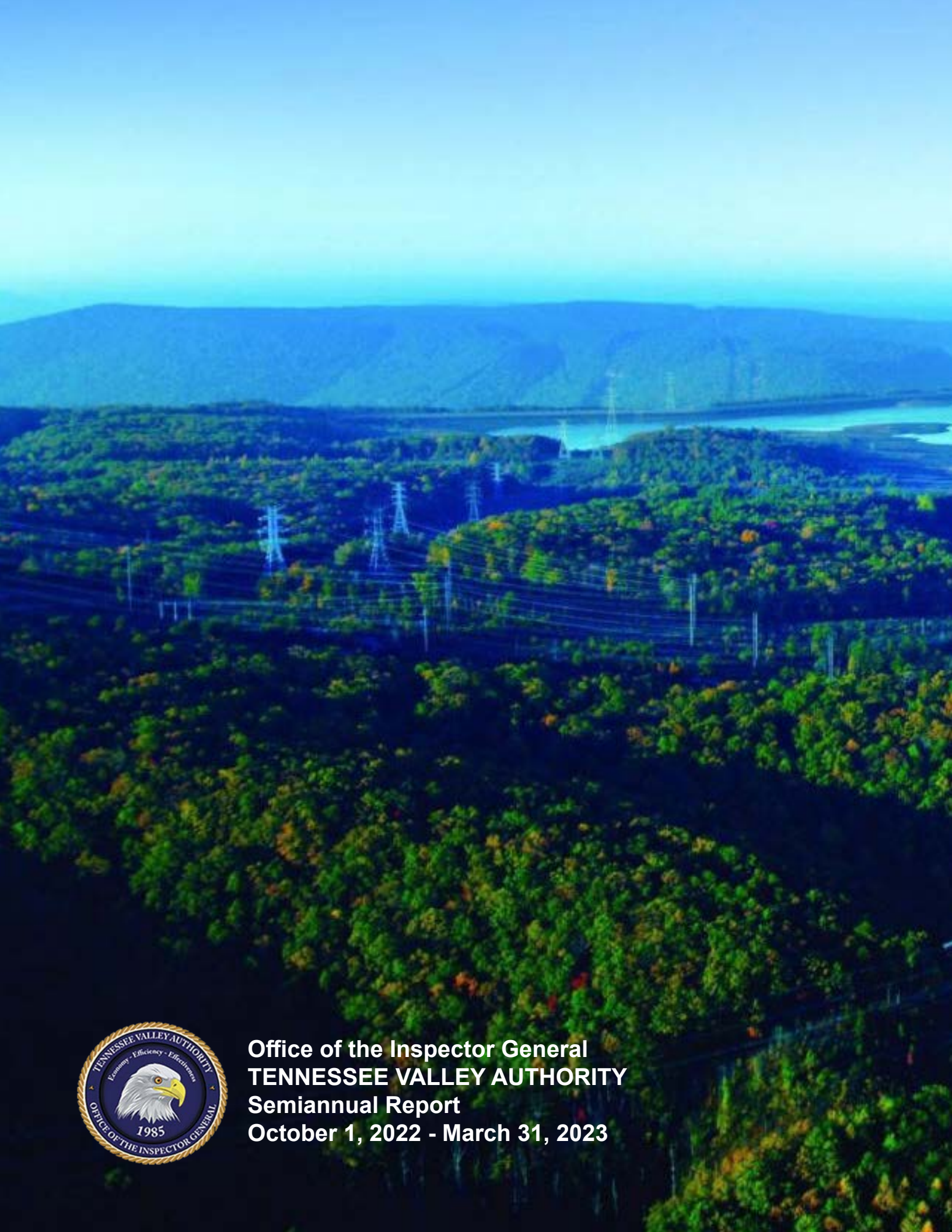
Effective Communication
Trusting Relationships
Integrity

Independence
Continuous Improvement
Accountability

We are a high performing work team that achieves OIG strategic objectives through operational excellence and modeling our values and behaviors every day.



Brownsville Combustion Turbine Plant



Office of the Inspector General
TENNESSEE VALLEY AUTHORITY
Semiannual Report
October 1, 2022 - March 31, 2023