



Memorandum from the Inspector General, ET 4C-K

June 23, 2009

TVA Board of Directors

FINAL REPORT – INSPECTION 2007-11399 – REVIEW OF TVA'S FINANCIAL PERFORMANCE

Attached is the final report which answers the basic question of "How is TVA doing in regard to financial performance." This report incorporates formal comments on a draft of this report, which were provided by Kimberly S. Greene, Chief Financial Officer and Executive Vice President, Financial Services.

This review is the second in a series that will provide an independent assessment of TVA's performance in key areas. The Office of the Inspector General will issue reports annually on TVA's financial performance as well as its operational, environmental, and customer relations performance. These reports are intended to give an objective assessment to the TVA Board of Directors and Congress regarding TVA's performance and to highlight significant challenges facing TVA.

This report will be placed on our Web site and delivered to Members of Congress. Please advise us of any sensitive information in this report that you recommend be withheld.

We would be happy to brief you on this report. If you have specific questions about this report, please contact Ben R. Wagner, Deputy Inspector General, at (865) 633-7500 or Robert E. Martin, Assistant Inspector General, Audits and Inspections, at (865) 633-7450.

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Attachment

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Tennessee Valley Authority
Office of the Inspector General

Inspection Report

REVIEW OF TVA'S FINANCIAL PERFORMANCE

Inspection 2007-11399
June 23, 2009

INTRODUCTION

What We Are Trying To Accomplish

This is the second in a series of inspections that seek to provide a perspective on the question, "How is TVA doing?" Although there are existing sources to answer that question, those sources often tend to be either hyper technical or anecdotal. Some sources require interpretation from TVA management. Also, the primary source of relevant information needed to assess TVA's financial performance—TVA's reports to the Securities and Exchange Commission (SEC)—can be difficult to understand. These reports are lengthy and contain detailed technical information. In fact, as recently as August 2008, an SEC Advisory Committee noted that "many individual investors may find a company's periodic reports overly complex and detailed."¹ We are attempting to fill the gap that exists in the information available for most TVA stakeholders to be able to understand how TVA "stacks up" against other utilities.

What We Are Evaluating

We will be addressing four key strategic areas including financial health, operational performance, environmental stewardship, and customer relations. We believe that if TVA's performance in these areas is documented and understood, the question "How is TVA doing?" will have been answered. Our reviews are intended to give an objective evaluation of TVA's performance and to present, as appropriate, the significant management challenges facing TVA. By doing this work, the Office of the Inspector General (OIG) adds value to stakeholders by objectively assessing key issues confronting TVA. The "audience" for the OIG is primarily the TVA Board, Congress, and residents of the Tennessee Valley.

Why the Office of the Inspector General Should Do These Reviews

There are three reasons why this work should fall to the OIG: (1) We have the expertise to do it. For over 20 years the OIG has been scrutinizing TVA programs and operations, and we have developed a cadre of professionals immersed in the analysis of utility work. Simply put, our people know TVA; (2) we have the independence to do it. The OIG does not have a stake in the outcome of any report we write. We are neither fans nor foes of TVA management. Whether TVA ranks high or low in comparison to other utilities does not in any way affect the OIG. We have complete discretion to look wherever we want and to report the facts as we find them; and (3) we print what we do. Our work is public and posted on our Web page—the good, the bad, and

¹ Final Report of the Advisory Committee on Improvements to Financial Reporting to the United States Securities and Exchange Commission, August 1, 2008, page 3.

everything in between. Transparency and accountability should be the hallmark of a government agency. Our very public work makes that more likely for TVA.

Why Now?

The United States (U.S.) is facing an energy crisis of historic proportions and when coupled with the recent national economic instability across the U.S., this combination presents unique challenges. Congress is currently grappling with issues that will directly impact TVA and other utility companies. The financial soundness of TVA is perhaps more important now than at any other time in history.

Moreover, TVA is in the throes of making strategic decisions that will affect generations of Valley residents. Historically, TVA has a spotty record in evaluating market conditions and investing in the right generation mix. The current financial status and performance metrics of TVA should be all the more transparent to its stakeholders. A high-performing, competitive, and forward-thinking TVA is more critical now than ever before.²

Why This Particular Report on Financial Performance?

Financial performance is a prime determinate of sustainable success. The strategic challenges facing TVA require a sound, long-term financial plan and vision. The key has always been and will always be accountability through management, financial reporting, and operational controls.

How We Did This Report

This inspection report will provide a high-level evaluation of TVA's financial performance. Specifically, we reviewed TVA's strategic goals and objectives focusing our evaluation on the three primary drivers: maintaining adequate revenue, making sound capital investments, and containing costs. In conducting this review, we: (1) assessed key performance measures and their alignment with the key strategic objectives, (2) evaluated TVA's results relative to targets and available benchmark information, and (3) identified key management challenges that could affect how successful TVA is in achieving these strategic objectives.

² The TVA Board approved construction of an 880-megawatt gas-fired power plant in northeast Tennessee and deferred two planned construction projects to upgrade gas plants in west Tennessee and northeast Mississippi at the June 2009 Board meeting held in Young Harris, Georgia. While the OIG will review TVA's cost benefit analysis used to make this decision, that will be the subject of a future report, and the impact of that decision on TVA's financial strength is not a part of this report.

Key factors we considered, where appropriate, were how TVA's results compare to (1) those of others and (2) the goals TVA sets for itself, as shown below. We also considered TVA initiatives for improving future performance.

RESULTS	4-5 Star Good	2-3 Star Fair	1 Star Poor
How do TVA's results compare to (1) those of other utilities and (2) the goals it sets for itself?	<ul style="list-style-type: none"> Measured results compare favorably with peer group for most of the key metrics. Measured results achieve TVA's goals. 	<ul style="list-style-type: none"> Measured results compare favorably with peer group for several of the key metrics. Measured results achieve a portion of TVA's goals. 	<ul style="list-style-type: none"> Measured results compare favorably with peer group for few of the key metrics. Measured results do not achieve TVA's goals.

More information regarding our objectives, scope, and methodology can be found in Appendix 1. We requested and received from the TVA Chief Financial Officer comments on a draft of this report. The comments are included in Appendix 2 to this report. Management expanded on points we made in various instances and disagreed with our assessment in certain areas. We made changes to the final report to clarify certain matters and to provide context suggested by TVA management. However, these changes did not affect our conclusions about TVA's financial performance. Our assessment and response to TVA management's comments are included in Appendix 3 to this report.

BACKGROUND

TVA operates the nation's largest public power system. In 2008, TVA provided electricity to 52 large industries, 6 federal agencies, and to 159 distributor customers that serve nearly 9 million people in seven southeastern states. TVA generates almost all of its revenues from the sale of electricity and, in 2008, revenues from the sale of electricity totaled \$10.3 billion.³ As a wholly owned agency and instrumentality of the U.S., however, TVA is different from other electric utilities in a number of ways. A few of the more distinguishing features include the:

- **Defined Service Area** – TVA has a defined service area established by federal law. Subject to certain minor exceptions, TVA may not, without specific authorization from the U.S. Congress, enter into contracts which would have the effect of making it, or the distributor customers of its power, a source of power supply outside the area for which TVA or its distributor customers were the primary source of power supply on July 1, 1957.
- **TVA Board's Rate Authority** – Typically, an investor-owned utility is regulated by a public utility commission which approves the rates the utility may charge. TVA, however, is self-regulated with respect to rates similar to other publically owned utilities. The TVA Act gives the TVA Board sole responsibility for establishing the rates TVA charges for power. In setting TVA rates, the TVA Board is charged by the TVA Act to have due regard for the objective that power be sold at rates as low as feasible.⁴

³ TVA had \$130 million in other revenues in addition to the \$10.3 billion from sales of electricity. Beginning October 2006, certain items previously considered revenue from sales of electricity were reclassified as other revenue including delivery point charges, administrative charges, and customer charges. Additionally, certain items previously considered revenue from other revenue were reclassified as other income. These items are not directly associated with revenue derived from electric operations but are associated with the operation of service organizations which provide environmental and maintenance and testing services.

⁴ The TVA Act specifies that TVA is to charge rates for power which will produce gross revenues sufficient to provide funds for (1) operation, maintenance, and administration of the power system; (2) payments to states and counties in lieu of taxes; (3) debt service on outstanding indebtedness; (4) payments to the U.S. Treasury in repayment of and as a return on the power facilities' appropriation investment; and (5) such additional margin as the TVA Board may consider desirable for investment in the power system assets, retirement of debt, and other purposes connected with TVA's power business.

- **Sources of Funding** – TVA, unlike investor-owned power companies, is not authorized to raise capital by issuing equity securities. TVA relies primarily on cash from operations and proceeds from power program borrowings to fund its operations. The TVA Act authorizes TVA to issue bonds, notes, and other evidences of indebtedness (collectively, "bonds") in an amount not to exceed \$30 billion at any time. As of September 30, 2008, TVA's total bonds, notes, and other obligations were \$25.1 billion.⁵
- **Required Stewardship Activities** – TVA's mission includes managing the United States' fifth largest river system, the Tennessee River and its tributaries, to provide, among other things, year-round navigation, flood damage reduction, affordable and reliable electricity, and, consistent with these primary purposes, recreational opportunities, adequate water supply, improved water quality, and economic development.

TVA published a Business Education Series to help employees better understand TVA and their role in helping the company achieve its strategic objectives. In discussing the "Big Picture," questions applicable to where TVA revenue comes from, where it goes, and what does this mean were answered. The questions and answers in the Business Education Series included:

How does TVA generate cash?

- By selling power to power distributors and direct-served customers.
- By selling power through power exchange agreements.
- By issuing bonds to pay for debt retirement or capital investments.

What does TVA use this cash for?

- Fuel (e.g., coal, uranium, and natural gas), materials/supplies, and services needed to run the business.
- Payroll and employee benefits, both for the power business and river stewardship.
- Interest and payments on debt.
- Payments in lieu of taxes to the states and counties where TVA does business or owns power property.

⁵ Specifically, TVA had (1) \$20.4 billion in long-term bonds and notes outstanding of various final maturities, (2) \$2.2 billion in short-term discount notes and current maturities of long-term debt, and (3) \$2.5 billion of other financing obligations outstanding including energy prepayment and lease/leaseback obligations. The amount of TVA's bonds outstanding has been reduced by about \$5 billion since September 30, 1996, when the end-of-year balance of outstanding bonds peaked.

- Capital expenditures to maintain plant and equipment and to fund investments in new generating plants and clean-air equipment.

What does all of this mean to TVA?

- "Prosperity and excellent quality of life in the Tennessee Valley create continuing demand for electricity, generating more revenue for TVA. TVA must be financially healthy to achieve excellence in business performance and public service."

Financial Performance Strategic Objective

According to the 2007 TVA Strategic Plan, TVA's strategic objective for financial performance is to: "**Adhere to a set of sound guiding financial principles to improve TVA's fiscal performance.**" According to the Plan, critical success factors include:

- Applying sound economic and financing practices to new investments.
- Paying financing obligations before assets are fully depreciated.
- Strengthening TVA's balance sheet by improving the ratio of financing obligations to total assets.
- Improving TVA's cash return on total assets in order to service debt, preserve existing assets, reinvest in new assets, and improve environmental performance.
- Achieving top-quartile performance in non-fuel operation and maintenance (O&M) expenses and then hold increases to be less than unit sales growth (kWhs).

As shown in Figure 1, TVA currently has three performance metrics in place to monitor TVA's performance toward successful implementation of its strategy.

Figure 1. TVA Financial Performance Measures.

Measures	Definition
Total Financial Obligations/Asset Value	Measure of debt-like obligations compared to total assets. Lowering debt-like obligations over the long term will produce a more flexible cost structure, allowing TVA to react more advantageously in the changing power market.
Earnings Before Interest, Taxes, Depreciation & Amortization (EBITDA)/Asset Value	Measure of profitability and return on assets. EBITDA is a good measure to evaluate profitability, and this measure allows TVA to compare its performance against the industry and evaluate trends over time.
TVA Non-Fuel O&M (\$/MWh Sales)	Measure of the most significant controllable component of TVA's total costs and represents the non-fuel O&M costs per MWh sales.

Source: TVA 2008 Balanced Scorecard.

SUMMARY CONCLUSIONS

In our judgment, TVA's overall financial performance for this assessment period was adequate; however, the agency faces several significant financial challenges, some of which recently emerged. This conclusion is based on our analysis of TVA's financial health in three areas: (1) maintaining adequate revenues, (2) making sound capital investments, and (3) containing costs. In summary:

- TVA's ability to set its own rates and the implementation of a fuel cost-adjustment clause provides flexibility to help maintain adequate revenues to cover costs. Additionally, TVA operates in a service area that is largely free from competition and has a large and diverse customer base.
- The electric utility industry is a very capital intensive one requiring TVA to make large-scale capital investment decisions. TVA currently projects annual capital spending of more than \$2 billion per year through 2011 and about \$2.9 billion in 2012. These investments pertain to new generation and transmission assets, environmental requirements, and existing assets that are aging and need regular upgrades to keep running. TVA has made certain investment decisions in the past that did not pay off. For example, TVA began a significant nuclear plant construction program in 1966 to meet projected system load growth that did not materialize. The construction program was largely abandoned over time due to the less-than-projected load growth. TVA is seeking to improve its capital investment decisions and the financial performance of its capital assets. TVA's ability to make these large investments will be a challenge given its financing structure and legislative debt ceiling. TVA is not allowed to raise financing by issuing equity securities but instead must rely on operating revenues and debt financing. According to TVA management, one of the factors TVA considers in making investment decisions is its investment in non-operational nuclear assets that were not completed and may provide unique, lower cost investment options for TVA in meeting load growth (e.g., the Browns Ferry Nuclear Plant (BFNP) Unit 1 restart, Watts Bar Nuclear Plant (WBNP) Unit 2, and Bellefonte Nuclear Plant (BLNP)).
- TVA is attempting to reduce certain costs to improve its financial position. It fares poorly when compared to other electric utilities with respect to non-fuel O&M costs. TVA is seeking to reduce non-fuel O&M costs but has made limited progress to date. TVA has also focused on reducing interest costs as a percentage of revenues and has made progress in doing so in recent years.

- It is important to note that TVA faces many significant management challenges in generating effective financial performance results. Recent events negatively affecting TVA financially include a wet coal fly ash spill at the Kingston Fossil Plant,⁶ declining power sales due to a downturn in the economy, a court ruling on a lawsuit brought by the state of North Carolina, and significant losses on accounts established to fund retirement and asset decommissioning. In addition, we have included in this report discussions of the necessity to manage commodity price, investment price, credit, and capital requirement risks, and the risk that interest rates might rise. In addition, while TVA's bond rating is based primarily more on its federal ties than its financial position, TVA management has identified maintaining the AAA bond rating as a risk factor in its 2008 U.S. SEC Annual Form 10-K.

⁶ As has been widely reported in the media, on December 22, 2008, a dike failed at Kingston, allowing approximately five million cubic yards of water and coal fly ash to flow out onto approximately 300 acres, primarily Watts Bar Reservoir and shoreline property owned by the U.S. and managed by TVA. TVA had originally estimated that 50 acres of property not managed by TVA had been affected by the spill. Fly ash is a by-product of a coal-fired plant and, according to the Tennessee Department of Health, may contain the following metals: arsenic, beryllium, cadmium, chromium, lead, selenium, thallium, and vanadium. See *infra* for a discussion of the estimated cost of this spill to TVA.

The following discussion provides the basis for our conclusions.

Maintaining Adequate Revenue (4 Star)



TVA's performance has been good in this regard. Unlike the typical electric utility, TVA has the ability to set its own rates. It also implemented a fuel cost-adjustment clause in fiscal year (FY) 2007 which provides the flexibility to help maintain adequate revenues to cover costs. In addition, TVA operates in a service area where competition is limited and has a large and relatively stable customer base. However, recent events such as the Kingston coal fly ash spill, significant losses on accounts established to fund retirement and asset decommissioning, and a downturn in the economy affecting power sales will severely test TVA's ability to generate adequate revenues.

TVA Has Rate Setting Flexibility

Typically, a utility is regulated by a public utility commission which approves the rates the utility may charge. In contrast, TVA is self-regulated with respect to rates. The TVA Act gives the TVA Board sole responsibility for establishing the rates TVA charges for power. These rates are not subject to judicial review or review or approval by any state or federal regulatory body.

The Act requires that TVA charge rates that produce sufficient revenues to provide funds for operation, maintenance, and administration of its power system; make payments to states and counties in lieu of taxes; make debt service payments; make payments to the U.S. Treasury in repayment of previous appropriations invested in TVA's power system plus a return on that investment; and allow an additional margin for investment in power system assets and for other purposes connected with TVA's power business. In setting TVA's rates however, the TVA Board is required by the TVA Act to have due regard for the objective that power be sold at rates as low as feasible.

On July 28, 2006, the TVA Board of Directors approved a fuel cost adjustment to be used quarterly to adjust TVA's rates to reflect forecasted changing fuel and purchased power costs. It was implemented in FY 2007 and first impacted rates on January 1, 2007. This fuel cost adjustment provides flexibility to help maintain adequate revenues to cover costs and help manage the volatility of fuel and purchased power costs. It allows TVA to reconcile its forecasts for fuel and purchased power costs with the actual costs. In assessing an electric utility, Standard & Poor's considers a utility's ability to pass along higher fuel costs to customers a key factor.

The fuel cost adjustment is part of consumer power bills. It can be either a charge or a credit, depending on quarterly increases or decreases in fuel and purchased power costs. Key factors that affect fuel and purchased power costs are the weather and changes in prices for various fuels. According to TVA officials, many utilities, including most neighboring TVA's service area, use similar rate adjustment mechanisms.

The Kingston coal fly ash spill will exert significant financial pressure on TVA. According to its first quarter 2009 10-Q filing with the SEC,⁷ TVA has begun to estimate the cost associated with the associated cleanup and recovery operations. According to an update presented by the Kingston Recovery Executive dated June 8, 2009, the estimated cost ranges from about \$675 million to about \$975 million, depending on the long-term disposal options. As of March 31, 2009, according to TVA's second quarter filing with the SEC,⁸ TVA has recognized a charge of \$675 million for the six months ended March 31, 2009, in connection with the current expected cleanup costs related to the event. Costs incurred through March 31, 2009, totaled \$77 million. The \$675 million expense currently includes, among other things, a reasonable estimate of costs to contain the cenospheres, perform sampling and analysis, construct the weir and dike, and the low end of an estimated range to remove an estimated 5 million cubic yards of ash. The cost of removal is in a large part dependent on the final disposal plan.

In addition, the value of assets held in TVA's retirement and asset decommissioning funds has dropped dramatically as financial markets have declined. The assets in TVA's retirement system declined by almost \$1.5 billion for the six months ended March 31, 2009. Because of this decline TVA may need to make additional contributions to the retirement system in the future. In a special called meeting on June 8, 2009, The TVA Retirement System Board voted to recommend a contribution by TVA to the System of \$300 million for fiscal year 2010. This has been communicated to TVA, and they are currently reviewing the request. In addition, for the same six-month period, TVA's nuclear decommissioning fund declined by \$240 million, which may require TVA to make additional contributions to its nuclear decommissioning trust to meet regulatory funding requirements. TVA does not anticipate making significant changes in its basic investment policies as a result of current market conditions.

⁷ TVA Form 10Q for the quarterly period ending December 31, 2008.

⁸ TVA Form 10Q for the quarterly period ending March 31, 2009.

Legislative Provisions Limit TVA's Exposure to Competition

According to Standard & Poor's, the extent to which an electric utility is shielded from competition is a key consideration in analyzing a utility's financial prospects. Certain provisions of law limit direct wholesale competition between TVA and other electric utilities. One provision is called the "fence," and one is called the "anti-cherry picking" provision.

The TVA Act was amended in 1959 to establish what is commonly referred to as the TVA "fence," which generally prohibits TVA from entering into contracts to sell power outside the service area that TVA and its distributors were serving on July 1, 1957.

The Energy Policy Act of 1992 provides TVA with certain protections from competition called the "anti-cherry picking" provision. This Act exempts TVA from having to allow other utilities to use its transmission lines to transmit power to customers within TVA's service area.

However, TVA is subject to some forms of indirect competition. For example, TVA has no protection against its industrial customers relocating outside its service area or businesses deciding not to move to its service area for reasons related to the cost of power. In addition, customers can decide to generate their own power, and distributors on the TVA boundary have the ability to purchase from another supplier. While in actuality all TVA customers have the ability to purchase power from other providers, as stated above, TVA does not have to provide transmission service for the purpose of delivering power within its service area for other providers.

TVA Has a Large and Diverse Customer Base

TVA has a large and diverse customer base. As of March 2009, it primarily sells power at wholesale to 158 distributor customers⁹ consisting of municipalities and cooperatives that resell the power at a retail rate to nearly 9 million people in seven southeastern states. In FY 2008, 83 percent of TVA's revenue was attributed to these sales. TVA also currently sells power to (1) 58 directly served industries and federal facilities and (2) 12 exchange power customers (electric systems that border TVA's service area) with which TVA has entered into exchange power arrangements.

⁹ Monticello EPB ("MEPB") provided the required five-year notice to terminate its TVA power contract on November 20, 2003. As a result, it was no longer a distributor of TVA power effective midnight on Thursday, November 20, 2008. With the departure of MEPB, TVA serves 158 power distributor customers.

Operating revenues by customer type for FYs 2005–2008 are shown in Figure 2.

Figure 2.

Operating Revenues by Customer Type for the Years Ended September 30 (in Millions)				
	2008	2007	2006	2005
Municipalities and cooperatives	\$ 8,659	\$ 7,847	\$ 7,659	\$ 6,539
Industries directly served ¹	1,472	1,221	1,065	961
Federal agencies and other				
Federal agencies directly served ¹	108	95	103	86
Off-system sales	13	17	13	95
Subtotal	10,252	9,180	8,840	7,681
Other revenues	130	146	143	101
Total operating revenues	\$ 10,382	\$ 9,326	\$ 8,983	\$ 7,782

Source: TVA Form 10K Pursuant to Section 13, 15(d), or 37 of the Securities Exchange Act of 1934, for the FY ended September 30, 2008.

Note:

¹ "In this table, sales to industries directly served are included in Industries directly served, and sales to federal agencies directly served and to exchange power customers are included in Federal agencies and other."

The downturn in the nation's economy has had an impact on TVA's energy sales in recent months. According to TVA's first quarter 2009 10-Q filing with the SEC, this downturn has resulted in less demand for power by certain customer types. In particular, some customers directly served by TVA have reduced production in response to the economic downturn. For the quarter ended December 31, 2008, TVA's energy sales to industries directly served declined by almost 9 percent compared to the same period the previous year, while energy sales to municipalities and cooperatives increased by less than 1 percent. In December 2008, TVA revised its forecast of total 2009 energy sales; the revised forecast is for 5 percent lower sales for the year than initially forecast.

According to TVA management, "The effects of the economic downturn are resulting in less demand for electric power. For the six months ended March 31, 2009, directly served industrial sales were down approximately 14.9% compared to the same period in the prior year, while municipal and cooperative sale experienced a 3.1% decline. TVA's total sales from electricity for the six months ended March 31, 2009, were down 5.6% from the same period in the prior year. TVA continues to revise its forecast for 2009 fiscal year energy sales."

