



Memorandum from the Office of the Inspector General

June 13, 2006

Kenneth R. Breeden, OCP 1F-NST
Randy P. Trusley, WT 4B-K

FINAL REPORT – INSPECTION 2005-522I – REVIEW OF TVA’S ROLE AS A RATE
REGULATOR

Attached is the subject final report for your review and action. Your written comments, which addressed your management decision and actions planned or taken, have been included in the report. Please notify us when final action is complete.

Information contained in this report may be subject to public disclosure. Please advise us of any sensitive information in this report which you recommend be withheld.

If you have any questions, please contact Gregory C. Jaynes, Deputy Assistant Inspector General, Inspections, at (423) 751-7821 or me at (865) 632-6309. We appreciate the courtesy and cooperation received from your staff during this inspection.

Ben R. Wagner
Assistant Inspector General
(Audits and Inspections)
ET 3C-K

RCU:BKA

Attachment

cc (Attachment):

Maureen H. Dunn, ET 11A-K
Theresa A. Flaim, WT 7B-K
Peyton T. Hairston, Jr., WT 7C-K
John P. Kernodle, ET 10A-K
Tom D. Kilgore, WT 7B-K
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OIG File No.2005-522I



Tennessee Valley Authority
Office of the Inspector General

Inspection Report

REVIEW OF TVA'S ROLE AS A RATE REGULATOR

Project Lead
Rick C. Underwood

2005-5221
June 13, 2006

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MEMORANDUM DATED MAY 24, 2006, FROM RANDY TRUSLEY
TO BEN R. WAGNER

EXECUTIVE SUMMARY

We conducted a review to assess the Tennessee Valley Authority's (TVA) role as rate regulator over municipal utilities and cooperatives (collectively "distributors") which purchase TVA power. The TVA Act imposes only one regulatory requirement, prohibiting discrimination between consumers of the same class. The TVA Act, however, also gives the Board authority to include terms and conditions in power contracts as needed to carry out the purposes of the Act, which include keeping rates as low as feasible. Pursuant to this authority, most power contracts include, in addition to the required nondiscriminatory provision, terms and conditions related to resale rates, use of revenues, and financial and accounting requirements.ⁱ

In summary, we determined the following:

- TVA is in a unique position as both a seller of electric power and a regulator over the rates charged by many of its customers. We believe there is an increasing inherent conflict in TVA serving as a regulator while working to ensure good customer relations. We further note, however, that distributors regulated by TVA face other pressures to control rates. For example, 717 publicly-owned electric systems responded to a September 2005 survey by the American Public Power Association indicating that they set rates without review by any independent regulatory body, instead relying on their elected officials or independent utility boards to control rates.ⁱⁱ
- In balancing these roles, TVA routinely reviews and approves resale rates. In performing this review function, TVA conducts financial modeling and analysis and works with distributors in a consultative manner regarding proposed rate adjustments. There are no formalized guidelines or specific criteria related to when rate adjustments should be disallowed.
- In addition to the review and approval of resale rates, TVA's power contract generally restricts distributors' use of electric revenues to exclude uses for non-electric system purposes. According to listings provided by Contracts and Pricing (CP), TVA has modified the contract requirements for at least 11 distributors since May

ⁱ Consistent with other municipal electric companies outside the Tennessee Valley, four distributors have opted out of TVA rate regulation.

ⁱⁱ According to the survey, the majority of respondents, or 60 percent, is governed by a city council, while the remaining 40 percent are governed by an independent utility board. City councils play a large part in determining the make-up of appointed utility boards as they either appoint or approve the board in most cases.

1998 to allow for the use of electric revenues for non-electric system purposes, including businesses involving broadband/fiber optic systems related to cable TV, Internet, and telephone. Per discussions with CP and Cost and Performance Analysis (C&PA) personnel, TVA approval of these non-electric uses of funds is based on review of business plans that (1) indicate potential benefits to the economy of the distributor's community and (2) consider the financial impact on the distributor. However, we found no documented guidelines on how these reviews should be conducted or when these uses should be approved.

- Additional information provided by C&PA appeared to indicate that another 13 distributors had used electric system funds for non-electric system uses. We requested the "Joint Use Agreements" for these 13 distributors; however, TVA management has not been able to provide them. Without a contract modification in the form of a "Joint Use Agreement," these distributors would appear to be in violation of the power contract.

We recommended that the Chief Financial Officer:

- Continue to evaluate TVA's role as regulator of rates as the issues of deregulation and customer choice evolve.
- Formalize procedures to ensure consistent review of (1) distributor financial information, including whether additional guidance should be developed to ensure the public interest of low rates is achieved; and (2) business plans which propose the use of electric system revenues for non-electric system purposes.
- Ensure that contract modifications are executed for any distributors approved to use electric system revenues for non-electric system purposes.

TVA management agreed with our recommendations, and we concur with their planned actions. See Appendix for a complete response.

BACKGROUND

Tennessee Valley Authority (TVA) sells power to 108 municipal utilities and 50 cooperatives (collectively “distributors”) that serve 8.5 million people and 650,000 businesses and industries in the seven-state TVA area. TVA’s regulatory authority is exercised through the terms and conditions included in TVA’s individual power contracts with these 158 distributors.¹ The basis for the terms and conditions included in the contracts can be found in the TVA Act.

THE TVA ACT

Section 12 of the TVA Act specifically addresses TVA’s responsibilities to regulate the resale of TVA power. Section 12 states:

That all contracts entered into between the Corporation and any municipality or other political subdivision or cooperative organization shall provide that the electric power shall be sold and distributed to the ultimate consumer without discrimination as between consumers of the same class, and such contract shall be voidable at the election of the Board if a discriminatory rate, rebate, or other special concession is made or given to any consumer or user by the municipality or other political subdivision or cooperative organization.

Other than the nondiscrimination provision, TVA’s Board was provided discretion in determining how to achieve the Act’s objectives. The Act gave the Board broad authority over resale rates and conditions of service. Specifically:

- Section 10 authorizes the TVA Board “to include in any contract for the sale of power such terms and conditions, including resale rate schedules, and to provide for such rules and regulations as in its judgment may be necessary or desirable for carrying out the purposes of this Act. . . .”
- Section 15d.(f) provides that one of the primary objectives of the TVA Act is that, “power shall be sold at rates as low as are feasible.”

¹ Consistent with other municipal electric companies outside the Tennessee Valley, four distributors have opted out of TVA rate regulation.

THE POWER CONTRACTS

The TVA Board, using its discretionary authority, incorporated provisions in the power contracts consistent with the statutory requirements and objectives of the TVA Act. The major regulatory sections of the generic power contract and accompanying schedule of terms and conditions that provide the basis for TVA's regulatory model include:

- Section 5, Resale Rates – Distributors must ensure that (1) power shall be sold and distributed to the ultimate consumer without discrimination among consumers of the same class, (2) consumers will be served in accordance with the schedule of rates and charges, and (3) rates and charges in the resale schedules will provide for the operation and maintenance of the electric system on a self-supporting and financially-sound basis.
- Section 5(c) – If the rates and charges provided for in said resale agreement do not produce sufficient revenues to provide for the operation and maintenance of the electric system on a self-supporting and financially sound basis, including requirements for interest and principal payments on indebtedness incurred or assumed by Municipal/Cooperative for the acquisition, extension, or improvement of the electric system (hereinafter called “System Indebtedness”), the parties shall agree upon, and Municipal/Cooperative shall put into effect promptly, such changes in rates and charges as will provide the increased revenues necessary to place the system upon a self-supporting and financially sound basis. If the rates and changes in effect at any time provide revenues that are more than sufficient for such purposes, as more particularly described in Section 6 hereof, the parties shall agree upon a reduction in said rates and charges, and Municipality shall promptly put such reduced rates and charges into effect.
- Section 6, Use of Revenues – Distributors agree to use gross revenues from electric operations for (1) current electric system operating expenses; (2) current payments of principal and interest on system indebtedness; (3) funding reasonable reserves for renewals, replacements, contingencies, and working capital; and (4) tax equivalent payments to general funds. All revenues remaining over and above the requirements described above shall be considered surplus revenues and may be used for new electric system construction or the retirement of system indebtedness prior to maturity; provided, however, that resale rates and charges shall be reduced from time-to-time to the lowest practicable levels considering such factors as future circumstances affecting the probable level of earnings, the need or desirability of financing a

reasonable share of new construction from such surplus revenues, and fluctuations in debt service requirements.

- Schedule of Terms and Conditions, Section 1, Financial and Accounting Policy – Distributors must:
 - Administer, operate, and maintain the electric system as a separate department; maintain a separate fund for revenues from electric operations; not mingle electric system funds or accounts; or not consolidate or combine the financing of the electric system with any other operations.
 - Keep the general book of accounts of the electric system according to the Federal Energy Regulatory Commission (FERC) Uniform System of Accounts.
 - Supply TVA with an annual financial report and other operating, statistical, and financial reports relating to the operating system as requested by TVA.
 - Have the electric system financial statements examined by independent certified accountants in accordance with generally accepted auditing standards.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to assess TVA's role as a rate regulator over 108 municipal utilities and 50 cooperatives representing over \$7 billion in power revenues from 8.5 million people and 650,000 businesses and industries in the seven-state TVA region. To achieve our objective, we:

- Reviewed (1) The TVA Act, (2) TVA's generic power contract, (3) TVA's distributor rate review process, and (4) other documentation to gain an understanding of TVA's role as a regulator.
- Conducted interviews with (1) Office of the General Counsel; (2) Cost and Performance Analysis (C&PA), TVA Chief Financial Officer (CFO); and (3) Contracts and Pricing (CP), Customer Service and Marketing (CS&M), to identify TVA's roles and responsibilities in the monitoring of distributor rates and use of power revenues.
- Conducted interviews with C&PA personnel to:
 - Determine policies and procedures followed and/or tools used to fulfill TVA's responsibilities.

- Identify policies and/or procedures in use for monitoring distributor’s financial position.
- Determine what action TVA takes if a distributor does not comply with the financial provisions of the TVA power contract.
- Conducted an analytical review of selected TVA distributor financial modeling data and interviewed, as appropriate, C&PA field accountants to assess regulatory activities and identify distributors with potential excess funds.
- Reviewed additional selected distributor financial information for fiscal years (FY) 2004 and 2005.²
- Reviewed C&PA rate increase information to determine the extent of financial reviews.
- Reviewed information provided by C&PA and CP personnel listing distributors that considered business plans using electric system funds for non-electric system purposes, including those for whom TVA approved the use of electric system funds for non-electric system purposes.
- Verified that a contract supplement was executed for the two distributors that had submitted business plans and had them approved within the 12 months prior to November 1, 2005.

Our scope did not include testing to confirm the accuracy of the financial information submitted by distributors. This inspection was conducted in accordance with the “Quality Standards for Inspections.”

OBSERVATIONS AND RECOMMENDATIONS

TVA is in a unique position as both a seller of electric power and a regulator over the rates charged by many of its customers. In balancing these roles, TVA reviews distributors’ financial condition, including proposed rate increases, and their use of revenues. However, we found no formalized guidelines or specific criteria:

- Related to when rate adjustments should be disallowed.
- Prescribing specific steps to be performed in the reviews of distributors’ financial information and business plans, when distributors request the use of electric system revenues for non-electric system purposes.

² When we refer to FYs in this report, we are referring to the distributor FY which runs from July 1 through June 30.

TVA'S EVOLVING ROLE

As deregulation has become more of a factor, TVA's role has evolved. Before the concept of deregulation, TVA supplied power to largely captive customers within the Valley. Distributors for the most part did not have an option of purchasing power from anyone but TVA. Correspondingly, TVA was restricted in the power it could sell outside the Valley. Accordingly, TVA did not have to be as concerned about the inherent conflict between acting as a regulator and preserving its customer base.

In recent years, however, distributors have begun to see options to purchase power from companies other than TVA, as illustrated by those distributors who have given TVA notice of intent to leave the system. The restrictions on TVA selling power outside the Valley, however, remain unchanged. Because TVA cannot obtain new customers outside the Valley, TVA has a strong incentive to take steps to ensure it retains its current customers. As competition becomes more and more of a reality, this incentive grows. It also inherently conflicts with TVA's past role as a regulator.

We believe there is an increasing inherent conflict in TVA serving as a regulator, while working to ensure customer satisfaction and retention. We further note in this regard that distributors regulated by TVA face other pressures to control rates. For example, 717 publicly-owned electric systems responded to a September 2005 survey by the American Public Power Association indicating that they set rates without review by any independent regulatory body, instead relying on their elected officials or independent utility boards to control rates.³

RESALE RATES

TVA's regulatory authority is exercised through the terms and conditions included in the individual power contracts. The only regulatory responsibility mandated by the TVA Act is that distributors not discriminate among customers of the same class. As noted previously, however, the TVA Board has used the broad discretion given it in the TVA Act also to include in the power contracts terms and conditions governing customer resale of electric power.

³ According to the survey, the majority of respondents, or 60 percent, is governed by a city council, while the remaining 40 percent are governed by an independent utility board. City councils play a large part in determining the make-up of appointed utility boards as they either appoint or approve the board in most cases.

We found that in performing its review function, TVA conducts financial modeling and analysis and works with distributors in a consultative manner to ensure rate adjustments are appropriate.

Financial Rate Review and Ratio Analysis

C&PA monitors compliance with distributor contract provisions and distributor financial health by performing financial analyses. C&PA analyses include using distributor monthly and annual financial data and a financial modeling tool to perform ratio analysis. Specifically:

- TVA requires distributors to provide monthly and annual financial data for inclusion in its modeling software.
- C&PA field accountants review distributor monthly and annual financial data, sales statistics, and independent audit reports, and evaluate application of FERC accounting procedures.
- C&PA prepares annual financial reports that include financial statements and key financial indicators with benchmark comparisons to other TVA distributors. This report is developed for TVA internal reviews and evaluations and is provided to distributors for monitoring their own performance.
- The financial data reported to TVA is also reconciled to independent auditors' reports by the C&PA field accountants.

Per discussions with the field accountants, resources allocated to the C&PA group have fluctuated many times in the past several years, with the number of field accountants ranging between 3 and 25. The number of individuals currently employed in this area has been increased from three to five in the last year. The field accountants stated that their goal is to complete two joint cost analyses or in-depth financial analyses per year in addition to other reviews performed above. In addition, there is one economist assigned to this group performing financial analysis and maintaining the modeling software.

Rate Reviews

The rates charged by the distributors and set forth in the power contract "Schedule of Rates and Charges" are reviewed and approved by TVA. TVA develops the guideline for distributor rate increases based on an established formula, which is based on normal increases in operating expenses, customer growth, and inflation. According to C&PA, they strive to perform an in-depth financial analysis of any distributors who request a rate increase above the guideline amount or when TVA determines (through review of profitability, liquidity, and debt coverage ratios) the distributor may have excess cash.

For FY 1999 through FY 2005, there were 240 rate increases with 121 being less than the guideline amount and 119 greater than the guideline amount. According to C&PA personnel, in-depth financial analyses were performed for all of the distributors with proposed rate increases above the guideline. During FY 2004, there were 97 requests for rate increases and all were approved with the exception of three increases which were postponed based on C&PA's recommendation.

Ratio Analysis

The Economist, C&PA, indicated that the normal range for the cash ratio⁴ for distributors is five to eight percent. C&PA has guidelines of critical limits which are used in evaluation of a distributor's financial condition through analysis and review of profitability, liquidity, and debt coverage ratios which indicate a distributor may be nearing a level of financial difficulty. However, there have been no guidelines established for the ratios used in their financial analysis to indicate when a distributor's rates and charges produce revenues more than sufficient for the operation and maintenance of the electric system on a self-supporting and financially-sound basis.

We reviewed the C&PA FY 2004 ratio analyses and identified 50 distributors with cash ratios ranging from 12.5 percent to in excess of 50 percent. For these 50 distributors, we noted the following related to rate actions:

- Thirty-two of the 50 distributors had rate increases in FY 2006.
- Four of the 32 distributors had an approved rate increase during FY 2006 in excess of TVA's guideline amount. According to C&PA, (1) increases were approved based on justification provided by the distributors, and (2) distributors are asked to provide reasons and future plans to justify raising rates over the guideline amount.
- Five of the 50 distributors reviewed were allowed to use electric system funds for non-electric system purposes.
- About half of the 50 distributors had cash on-hand on June 30, 2005, that ranged from two to five times their annual operations and maintenance expenses. Fourteen of these distributors had rate increases approved for FY 2006 with one exceeding the guideline amount.

⁴ C&PA calculates cash ratio as Unrestricted Cash and Temporary Cash Investments divided by Power Cost plus Operating and Maintenance Expense.

We also judgmentally selected 21 of the identified distributors for discussion with the responsible field accountant to determine TVA's knowledge regarding the justification for the FY 2004 ratios. The field accountants responsible for 11 of the selected distributors had just returned to the department in FY 2005 and had not reviewed the ratios from the previous year's results. For the other ten distributors, the explanations provided fell into the following categories:

- Three – Funds were being spent on capital projects.
- Five – Ratios alone could be misleading. These are very small distributors and any excess could be wiped away by damage from one storm.
- One – TVA is currently working with distributor to reduce rates over time.
- One – All cash appeared to be restricted.

Our analysis in and of itself is not a complete indicator of the financial health of a distributor. It illustrates, however, the need for consistent guidelines and specific criteria for determining when it is appropriate to work with the distributors to restrict increases or reduce rates. As noted above, TVA has performed a regulatory role in a consultative manner given the potential for a deregulated environment. Additionally, TVA has worked with distributors on occasion to postpone rate increases.

USE OF REVENUES

As noted previously, TVA's power contracts with distributors generally require that gross revenues from electric operations be used for specified electric system purposes. According to C&PA and CP, revenue use requirements are monitored through the review of financial reports and business plans submitted to TVA and through day-to-day contact between C&PA field accountants, customer service staff, and distributor staff. TVA also prepares periodic joint use studies to ensure proper allocation of costs between electric and non-electric departments or businesses.

We found that in certain cases, after review of the proposed business plan and the distributor's financial condition, TVA has allowed distributors to use electric system revenues to fund new business ventures (telecommunications, electric utility supply business, etc.) deviating from the standard "Use of Revenues" requirements in the power contract. In these cases, TVA enters into a "Joint Use Agreement" with the distributor as provided for in Section 1(a) of the

“Schedule of Terms and Conditions” of the Power Contract with the distributor. This agreement allows the distributor to use electric system funds for non-electric system uses based on assurances from the distributor regarding the venture and terms and conditions set by TVA for the uses of the funds. CP provided a listing of 11 distributors who had entered into these agreements with TVA.

Additional information provided by C&PA appeared to indicate that another 13 distributors had used electric system funds for non-electric system uses. We requested the "Joint Use Agreements" for these 13 distributors; however, TVA management has not been able to provide them. Per the Manager, Product Management & Specialized Projects, "Approval of such ventures via a letter from the Customer Service Manager may have been provided." Without a contract modification in the form of a "Joint Use Agreement," these distributors would appear to be in violation of the power contract.

The non-electric business ventures submitted to TVA between May 1998 and July 2005 included cable TV, Internet, telephone, propane or natural gas, and other business activities.⁵ Some distributors submitted a business plan and began construction. Other distributors had plans prepared but decided not to enter when city governments would not guarantee financing. Within the past year, four requests for non-electric use of electric system funds have been submitted:

- Two business plans have been presented and the non-electric use of electric system funds approved.
- One business plan has been submitted and is being reviewed.
- Partial business plan documentation including “pro forma” financial statements and projected business trends have been submitted and non-electric use of electric system funds approved for wireless Internet.

Based on discussions with CP and C&PA personnel, these approvals have been based on review of proposed business plans that indicate a potential economic benefit to the distributor’s community and limited financial risk to the electric system. When a business plan is submitted, a determination is made whether the business venture affects the electric system financially. If the conclusion is that it does, then an analysis is performed to determine the extent of that financial

⁵ The majority of requests were submitted by distributors in Tennessee after a 1999 amendment to Tennessee state law which allowed municipalities to use electric revenues as loans for businesses related to the provision of cable service, two-way video transmission, video programming, Internet services, or any other like system, plant, or equipment.

impact. Issues considered include, but are not limited to, any joint use of electric department assets and staff, any assets or revenues pledged for debt collateral, lending or pledging of funds, and assumption of shortfalls during startup periods. Worst case scenarios are viewed with the potential impact on cash position and resale electric rates. Staff comments are offered on obvious omissions within a business plan such as neglect in addressing competition, changes in technology, or revealing the source of financing; however, the prime emphasis of the analysis is to assess the financial impact on the electric system. An opinion is not generally expressed on the viability of a business and its ultimate failure or success. We found no specific criteria, however, regarding when use of electric system revenues for non-electric system purposes should be approved or disapproved.

Recommendations

We recommended that the Chief Financial Officer:

- Continue to evaluate TVA's role as regulator of rates as the issues of deregulation and customer choice evolve.
- Formalize procedures to ensure consistent review of (1) distributor financial information, including whether additional guidance should be developed to ensure the public interest of low rates is achieved; and (2) business plans which propose the use of electric system revenues for non-electric system purposes.
- Ensure that contract modifications are executed for any distributors approved to use electric system revenues for non-electric system purposes.

Management's Response - The Vice President and Controller provided comments on a draft of this report and agreed to implement our recommendations.

In response to our recommendations, management plans to take the following actions:

- A multi-organizational team (CFO will initiate) with representatives from CFO, Customer Service & Marketing, and OGC will review and make recommendations regarding TVA's role as a regulator of rates and as reviewers of use of the electric system for non-electric system purposes. Planned completion of the recommendations is scheduled for December 31, 2006.

- CFO will formalize current documentation of procedures for reviewing (1) distributor financial information, including whether additional guidance should be developed to insure public interest of low rates is achieved; and (2) business plans which propose the use of electric system revenues for non-electric system purposes. This will incorporate output from the multi-organizations team reviewing TVA's role as a regulator of rates and as reviewer of the use of the electric business for non-electric system purposes. Planned completion is December 31, 2006.

The complete text of TVA management's response is provided in the Appendix.

Auditor's Comments – We concur with TVA management's planned actions.

May 24, 2006

Ben R. Wagner, ET 3C-K

TRANSMITTAL OF DRAFT INSPECTION REPORT - INSPECTION 2005-522I - REVIEW OF
TVA'S ROLE AS A RATE REGULATOR

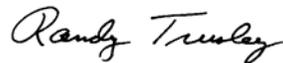
This is in response to your memorandum dated May 1, 2006.

1. Agreement or disagreement with all facts, conclusions, and recommendations.

- We agree that TVA's role as a regulator of rates should continue to be evaluated as the issues of deregulation and customer choice evolve.
- We are in agreement that documentation of current procedures for reviewing: (1) distributor financial information, including whether additional guidance should be developed to insure public interest of low rates is achieved, and (2) business plans which propose the use of electric system revenues for non-electric system purposes, should be more formalized.
- We are in agreement that contract modifications should be executed for any distributors approved to use electric system revenues for non-electric system purposes.

2. Actions taken or planned and the date actions were completed or are planned to be completed.

- A multi-organizational team (CFO will initiate) with representatives from CFO, Customer Service & Marketing, and OGC will review and make recommendations regarding TVA's roles as a regulator of rates and as reviewers of use of the electric system for non-electric system purposes. Planned completion of the recommendations is scheduled for December 31, 2006.
- CFO will formalize current documentation of procedures for reviewing: (1) distributor financial information, including whether additional guidance should be developed to insure public interest of low rates is achieved; and (2) business plans which propose the use of electric system revenues for non-electric system purposes. This will incorporate output from the multi-organizations team reviewing TVA's roles as a regulator of rates and as reviewer of the use of the electric business for non-electric system purposes. Planned completion is December 31, 2006.



Randy Trusley
Vice President & Controller
WT 4B-K

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