



Memorandum from the Office of the Inspector General

January 19, 2010

Kimberly S. Greene, WT 7B-K

REQUEST FOR FINAL ACTION – AUDIT 2008-12042 – DISTRIBUTOR REVIEW OF
TULLAHOMA UTILITIES BOARD

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 that you recommend be withheld.

If you have any questions, or wish to discuss our findings, please contact Richard C. Underwood, Project Manager, at (423) 785-4824 or Jill M. Matthews, Deputy Assistant Inspector General, Audits and Support, at (865) 633-7430. We appreciate the courtesy and cooperation received from your staff during the audit.

A handwritten signature in black ink that reads "Robert E. Martin". The signature is written in a cursive style.

Robert E. Martin
Assistant Inspector General
(Audits and Inspections)
ET 3C-K

SLS:HAC

Attachment

cc (Attachment):

Steve Byone, WT 4B-K
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John M. Hoskins, WT 4C-K
Tom D. Kilgore, WT 7B-K
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OIG File No. 2008-12042



Office of the Inspector General

Audit Report

To the Group President,
Strategy and External
Relations

DISTRIBUTOR REVIEW OF TULLAHOMA UTILITIES BOARD

Audit Team

Richard C. Underwood
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Audit 2008-12042
January 19, 2010

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- A. LETTER DATED DECEMBER 17, 2009, FROM DWIGHT A. MILLER TO ROBERT E. MARTIN
- B. MEMORANDUM DATED DECEMBER 23, 2009, FROM KIMBERLY S. GREENE TO ROBERT E. MARTIN



TVA Office of the Inspector General

Why the OIG Did This Review

As part of the annual audit plan, the OIG performed a review of the Tullahoma Utilities Board (Tullahoma), which is a distributor for the Tennessee Valley Authority (TVA) power based in Tullahoma, Tennessee. Annual revenues from electric sales were approximately \$24.4 million in fiscal year 2008. TVA relies on distributors to self-report customer usage and subsequently the amount owed to TVA (Schedule 1). Customers are generally classified as residential, commercial, manufacturing, and lighting. Within these classifications are various rate classes based on the customer type and usage.

The objective of the review was to determine compliance with key provisions of the power contract between TVA and Tullahoma including (1) proper reporting of electricity sales by customer class to facilitate proper revenue recognition and billing by TVA; (2) nondiscrimination in providing electricity to members of the same rate class; and (3) use of revenues, including any surplus, for approved purposes, such as operating expenses, debt service, tax equivalent payments, and reasonable reserves for renewals, replacements, and contingencies.

What the OIG Recommends

We recommend the Group President, Strategy and External Relations, work with Tullahoma to (1) remediate classification and metering issues, (2) comply with contract provisions related to proper allocation of joint costs, and (3) strengthen its internal controls.

TVA and Tullahoma management generally agreed with and are taking actions to address the recommendations. See Appendices for complete responses.

For more information, contact Richard Underwood, Project Manager, at (423) 785-4824 or Jill Matthews, Deputy Assistant Inspector General, Audits and Support, at (865) 633-7430.

January 2010

Audit 2008-12042 Tullahoma Utilities Board

What the OIG Found

Our review of Tullahoma found improvements were needed in the areas of:

- **Customer Classification and Metering** – We identified 14 customers not classified correctly and one metering issue that could impact (1) the proper reporting of electric sales and (2) nondiscrimination in providing electricity to members of the same rate class. We were unable to estimate the monetary effect of all the classification and metering issues because in some instances information was not available; however, for those where information was available, the monetary effect on Tullahoma and TVA would not be material.
- **Contract Compliance** – We identified two areas where Tullahoma was not meeting power contract requirements with TVA. Specifically, we found inconsistent allocation of costs between service departments and customers with demand above 50 kilowatts without a contract.
- **Distributor Internal Controls** – We noted Tullahoma's internal controls could be strengthened to improve completeness, accuracy, and validity of billing system data. Specifically, we found Tullahoma has disabled the audit logging function of the billing system and management was not reviewing exception reports showing changes to customer accounts or other billing system data.

In addition, we found Tullahoma had more than enough cash on hand to cover planned capital projects and provide a cash reserve. The cash reserve after planned capital projects was about 29 percent. While TVA has established guidelines to determine if a distributor has adequate cash reserves (cash ratio of 5 percent to 8 percent), TVA has not established guidelines to determine if a distributor's cash reserves are excessive. Based on prior distributor audit findings, TVA is in the process of defining criteria for determining when a distributor's cash reserves are excessive. We also noted that Tullahoma used electric system funds to pay for expenses of the fiber optic business prior to obtaining TVA approval to loan funds to the fiber department.

Finally, we identified certain opportunities to enhance TVA oversight of the distributors that were also identified in previous distributor audits. TVA is in the process of addressing these findings which include the (1) absence of a joint cost study being performed in over 20 years, (2) lack of an adequately defined process to document approval of credits, (3) lack of guidance related to when a demand meter is required, (4) lack of guidance on what constitutes prudent expenditures, and (5) lack of criteria for evaluating when a distributor's cash is excessive.

BACKGROUND

The Tullahoma Utilities Board (Tullahoma) is a distributor for Tennessee Valley Authority (TVA) power based in Tullahoma, Tennessee, with revenues from electric sales of approximately \$24.4 million in fiscal year (FY) 2008. TVA relies on distributors to report customer usage and subsequently the amount owed to TVA (Schedule 1). Customers are generally classified as residential, commercial, manufacturing, and lighting. Within these classifications are various rate classes based on the customer type and usage. Table 1 shows the customer mix for Tullahoma as of June 2008.

Tullahoma's Customer Mix as of June 2008

Customer Classification	Number of Customers	Revenue	Kilowatt Hours Sold
Residential	8,481	\$10,003,568	130,446,395
General Power – 50 Kilowatt (kW) & Under (Commercial)	1,577	2,576,959	28,619,076
General Power – Over 50 kW (Commercial or Manufacturing)	263	11,244,566	157,519,809
Street and Athletic	10	399,498	3,292,770
Outdoor Lighting ¹	31	210,880	1,482,669
Total	10,362	\$24,435,471	321,360,719

Table 1

The distributors are required to establish control processes over customer setup, rate application, and measurement of usage to ensure accurate and complete reporting to TVA. Tullahoma, like many other distributors, outsources its billing and invoice processing to a third-party processor, Local Government Data Processing Corporation (LGDPC). Tullahoma uses LGDPC systems to establish and set up new customers, input customer meter information, perform the monthly billing process, and execute customer account maintenance. All other accounting and finance responsibilities are done by Tullahoma, which has a Board of Directors providing oversight and a manager and accountant managing the daily activities. Tullahoma also operates water, sewer, and fiber optic businesses.²

¹ This customer count represents those customers who only have Outdoor Lighting accounts with Tullahoma. Another 578 customers at June 30, 2008, had outdoor lighting accounts with Tullahoma as well as accounts for other services. The kilowatt hours sold include all kilowatt hours for all accounts.

² Tullahoma's fiber optic business, Lightube, provides Tullahoma's customers with the option of adding internet, phone, and/or digital television services.

OBJECTIVE, SCOPE, AND METHODOLOGY

This audit was initiated as a part of our annual workplan. The objective was to determine compliance with key provisions of the power contract between TVA and Tullahoma including:

- Proper reporting of electricity sales by customer class to facilitate proper revenue recognition and billing by TVA.
- Nondiscrimination in providing electricity to members of the same rate class.
- Use of revenues, including any surplus, for approved purposes, such as:
 - Operating expenses;
 - Debt service;
 - Tax equivalent payments; and
 - Reasonable reserves for renewals, replacements, and contingencies.

To achieve our objective, we:

- Obtained Tullahoma electronic billing information from LGDPC for the audit period. The information was not complete because LGDPC does not maintain historical rate information for customers. We used the information available to generate reports of exceptions related to classification and metering and conducted further review of documentation and discussed with management.
- Documented and tested the procedures and controls in place to ensure complete and accurate invoicing of payments to TVA.
- Determined through inquiry and review of documentation whether Tullahoma had any nonelectric system-related business interests, supported by electric system funds.
- Reviewed disbursements to determine if electric system funds were used for any items not allowed under the TVA power contract.
- Reviewed methodology for allocations between electric and nonelectric lines of business for reasonableness and consistency of application.
- Reviewed cash and cash equivalents in relation to planned capital expenditures and other business uses of cash.
- Used nonstatistical sampling methods as needed to perform the tests above.

The scope of the review was for the period July 2006 through June 2008. Fieldwork was conducted in September 2009. This performance audit was conducted in accordance with generally accepted government auditing

standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. In performing this audit, nothing came to our attention that indicated noncompliance with applicable laws and regulations.

FINDINGS

Our review of Tullahoma found issues involving customer classification and metering that could impact (1) the proper reporting of electric sales and (2) nondiscrimination in providing electricity to members of the same rate class. In addition, we found Tullahoma had more than enough cash on hand to cover planned capital projects and provide a cash reserve of about 29 percent. While TVA has established guidelines to determine if a distributor has adequate cash reserves (cash ratio of 5 percent to 8 percent), TVA has not established guidelines to determine if a distributor's cash reserves are excessive. We also noted Tullahoma used electric system funds to pay for expenses of the fiber optic business prior to obtaining TVA approval to loan funds to the fiber department.

We also found improvements were needed to (1) comply with contract provisions regarding allocation of costs between departments and the establishment of written contracts with customers with demand above 50 kW, and (2) improve Tullahoma's internal controls related to monitoring of data changes. Finally, we have identified certain opportunities to enhance TVA oversight of the distributors.

PROPER REPORTING OF ELECTRIC SALES AND NONDISCRIMINATION IN PROVIDING ELECTRICITY TO MEMBERS OF THE SAME RATE CLASS

As discussed below, we identified issues involving the classification of customers and metering which could impact the proper reporting of electric sales. In addition, these issues impact the ability to ensure nondiscrimination in providing power to members of the same rate class.³ We were unable to estimate the monetary effect of the metering issue discussed below because customer demand information was not available. However, for the two customer classification items, the monetary effect on Tullahoma and TVA was not material. Correcting classification and metering issues is nonetheless important to ensure all customers are placed in the correct rate classification and charged the same rate as other customers with similar circumstances.

³ Section 5 Resale Rates subsection (a) of the power contract between TVA and Tullahoma, states that "power purchased hereunder shall be sold and distributed to the ultimate consumer without discrimination among consumers of the same class and that no discriminatory rate, rebate, or other special concession will be made or given to any consumer, directly or indirectly."

Customer Classification Issues

We found 14 customers that were not classified properly. The monetary impact of the classification issues below was not material to Tullahoma or TVA. We noted 14 customers were classified as residential instead of commercial under the General Power Service schedule (GSA) Part 1.⁴ According to the Residential Rate Schedule, "this rate shall apply only to a single-family dwelling where the major use of electricity is for domestic purposes." Specifically, we found:

- Five customer accounts were commercial businesses. According to Tullahoma personnel, two of these locations were previously residential dwellings that have since become commercial. The accounts were most likely misclassified because the classification defaulted to residential during customer setup. According to Tullahoma personnel, these accounts have been reclassified.
- Nine customer accounts were for service other than residential, such as garages, barns, and a neighborhood sign. These customers also had a separate meter for their residences. According to Tullahoma personnel, these accounts have been reclassified.

Metering Issue

In addition to the customer classification issues, our review of billing agency data noted an issue related to metering of customers at Tullahoma. We found 17 customers classified as a GSA Part 2 had energy usage in excess of 15,000 kilowatt hours (kWh) but were not measured for demand.⁵ Under Part 2 of the GSA Schedule and the Wholesale rate schedule with TVA, there would be no effect on the revenues for TVA or the distributor unless customer demand exceeded 50 kW. Without demand meters in place or evidence indicating other

⁴ Under the General Power Rate - Schedule GSA between Tullahoma and TVA, customers are classified based on the following requirements:

- GSA Part 1 - If (a) the higher of (i) the customer's currently effective contract demand, if any, or (ii) its highest billing demand during the latest 12-month period is not more than 50 kW and (b) customer's monthly energy takings for any month during such period do not exceed 15,000 kWh.
- GSA Part 2 - If (a) the higher of (i) the customer's currently effective contract demand or (ii) its highest billing demand during the latest 12-month period is greater than 50 kW but not more than 1,000 kW or (b) if the customer's billing demand is less than 50 kW and its energy takings for any month during such period exceed 15,000 kWh.
- GSA Part 3 - If the higher of (a) the customer's currently effective contract demand or (b) its highest billing demand during the latest 12-month period is greater than 1,000 kW.

⁵ Demand is a measure of the rate at which energy is consumed. The demand an electric company must supply varies with the time of day, day of the week, and the time of year. Peak demand seldom occurs for more than a few hours or fractions of hours each month or year, but electric companies must maintain sufficient generating and transmission capacity to supply the peak demand. Demand charges represent the high costs electric companies pay for generating and transmission capacity that sits idle most of the time. Demand charges are based on the amount of energy consumed in a specified period of time known as a demand interval. Demand intervals are usually 15 or 30 minutes. (Engineering Tech Tips, December 2000, Dave Diezinger, Project Leader, United States Department of Agriculture Forest Service, Technology & Development Program, <http://www.fs.fed.us/eng/pubs/htmlpubs/htm00712373/index.htm>.)

For TVA distributors, the commercial and manufacturer Schedules of Rates and Charges direct that metered demand be calculated as "the highest average during any 30-consecutive-minute period of the month of the load metered in kW."

circumstances exist which would prevent a customer from exceeding demand of 50 kW, we could not determine if any of these customers would have exceeded 50 kW.⁶ Therefore, we were unable to estimate the monetary effect of this issue.

USE OF ELECTRIC SYSTEM REVENUES

Under the TVA power contract, approved uses of revenues from electric system operations, including any surplus, are (1) operating expenses; (2) debt service; (3) tax equivalent payments; and (4) reasonable reserves for renewals, replacements, and contingencies. As discussed further below, we noted Tullahoma (1) had more than enough cash on hand to cover planned capital projects and provide a cash reserve of about 29 percent and (2) used electric system funds to pay for expenses of the fiber optic business prior to obtaining TVA approval to loan funds to the fiber department.

Cash Reserves

We found Tullahoma had more than enough cash on hand to cover planned capital projects and provide a cash reserve. As of June 30, 2008, Tullahoma reported about \$7.5 million in its cash and cash equivalent accounts, and the cash reserve after planned capital projects was about 29 percent. While TVA has established guidelines to determine if a distributor has adequate cash reserves (cash ratio⁷ of 5 percent to 8 percent), TVA has not established guidelines to determine if a distributor's cash reserves are excessive.⁸

Table 2 shows information about plans for major capital expenditures obtained from Tullahoma's general manager.

Tullahoma's Planned Capital Expenditures

Capital Expenditure Plans	Project Cost
Service Center Improvements	\$120,000
Transformers	\$100,000
Replace Truck #376	\$135,000
Replace Truck #397	\$18,000
Underground Thumper	\$35,000
Total Planned Capital Expenditures	\$408,000

Table 2

⁶ In response to a finding in a previous report, TVA indicated guidance will be issued to distributors to evaluate whether a demand meter is needed when usage reaches 25,000 kWh for a customer. None of the 15 customers' usage reached 25,000 kWh during the audit period.

⁷ TVA reviews the cash ratios of distributors as part of its regulatory rate review function. Cash ratio is calculated as follows:

$$\frac{\text{Cash} + \text{Cash Equivalents}}{\text{Total Variable Expenses (Operations and Maintenance} + \text{Purchased Power)}}$$

⁸ In separate reports issued on other distributors in May 2009, we recommended TVA develop criteria to be used in determining whether a distributor's cash reserves are excessive and incorporate the criteria into the rate setting process. TVA management agreed and will make recommendations to the TVA Board that additional financial metrics be employed for purposes of administering the resale rate provisions in Section 5 of the wholesale power contracts. The need to consider cash reserves will be included in TVA management's recommendations to the Board. A change in the current guidelines to include these additional financial metrics requires Board action. Target completion date is December 2010.

When compared to Tullahoma's capital expenditure plans for the foreseeable future, the balance in Tullahoma's cash accounts was enough to pay for these items and leave about \$7 million as a reserve, as shown in Table 3. Table 3 also shows Tullahoma's cash ratio percentage was about 32.7 percent before accounting for planned capital expenditures and about 29.2 percent after accounting for them.

Tullahoma's Cash Accounts Compared to Planned Capital Expenditures

	Cash and Cash Equivalents	Planned Capital Expenditures	Reserve After Planned Capital Expenditures
FY 2008	\$7,495,733	\$408,000	\$7,087,733
Cash Ratio Percentage	32.7%		29.2%

Table 3

According to TVA records, over the past five years, Tullahoma was approved for rate increases in 2003, 2007, and 2008. Table 4 shows the rate increases received by Tullahoma and the cash position and cash ratio at June 30 prior to the effective date of the rate increase.

Tullahoma's Rate Increases, Cash Position, and Cash Ratio

Cash on Hand Equivalent to an 8% Cash Ratio	Cash and Cash Equivalents ⁹ and Cash Ratio	Rate Increase ¹⁰		
		Additional Revenue	Percent	Effective Date
\$1,427,541	\$4,343,851 (CR – 24%)	\$226,778	1.25%	10/1/2003
\$1,652,167	\$6,071,471 (CR – 29%)	\$61,218	0.28%	4/1/2007
\$1,748,704	\$6,485,532 (CR – 30%)	\$422,939	1.83%	4/1/2008

Table 4

Discussions with Tullahoma's management indicated the operating philosophy of the Board of Directors and management was to use a conservative, generally debt-averse approach. In 2001, Tullahoma's Board established its own targets for electric system cash reserves because of the "... potential for large unanticipated capital outlays due to acts of nature...." The cash reserve target consisted of (1) 10 percent of the electric department plant assets (undepreciated) and (2) 10 percent of the annual operating and maintenance

⁹ The cash and cash equivalents and cash ratio were computed based on information from Tullahoma's annual report as of June 30 prior to the effective date of the rate increase.

¹⁰ These are the rate increases requested by and approved for the distributor. These increases do not include any rate increases or decreases made by TVA, including fuel cost adjustments, which were passed through by the distributor to the customer.

cost plus the annual wholesale power cost. Using these guidelines, we calculated Tullahoma's target cash reserve for the electric system for FY 2008 to be approximately \$4.4 million. Tullahoma still held approximately \$3.1 million in cash reserves in excess of its established target.

Use of Funds for Fiber Optic Business

During our review of payments made from electric system revenues, we noted (1) the Tullahoma Board of Public Utilities approved approximately \$40,000 to be spent out of electric system revenues for a feasibility study relating to the fiber optic business in December 2006 without obtaining TVA approval, (2) for a period of time, Tullahoma paid fiber department expenses out of electric system funds rather than loan the entire TVA-approved amount in a lump sum, and (3) loan documents did not exist between the electric and fiber departments indicating the payment terms, interest rates, electric department recourse, etc. At the end of our audit period, June 30, 2008, the fiber department had not made its TV, telephone, or internet services available to the public. The first test customers were provided service in the summer of 2008, and the first customers were billed for fiber service in January 2009.

Feasibility Study

In December 2006, Tullahoma's Board approved \$40,000 of electric funds to be used for a feasibility study related to the fiber optic business. In March 2007, Tullahoma spent approximately \$33,000 of electric system revenues to perform the feasibility study. TVA did not approve this use of the electric revenues.

Financing of and Method of Paying for Fiber Department Expenses

In June 2007, TVA approved (1) Tullahoma to loan approximately \$800,000 from electric department revenues to the fiber division for start-up operations and (2) a \$2.2 million line of credit from the electric department that could be used in the future. In addition, the City of Tullahoma Board of Mayor and Aldermen approved a bond issue for the fiber department not to exceed \$17.1 million. These bonds were issued in July 2007, and Tullahoma received \$16.4 million from bond proceeds for the fiber business. Approximately \$33,000 of these funds was used to reimburse the electric department for expenses related to the fiber feasibility study. According to Tullahoma management, no other amounts loaned to the fiber department by the electric department have been repaid to date.

After obtaining approval from TVA to loan \$800,000 to the fiber department for working capital, Tullahoma paid the fiber department expenses directly out of electric system funds and then added the expenditure amounts to the balance due from the fiber department rather than loan the entire \$800,000 to the fiber department in a lump sum. As of June 30, 2008, the electric department had loaned and/or paid expenses of approximately \$180,000 to/for the fiber department. In November 2008, Tullahoma ceased paying fiber department expenses out of electric system funds and is now making loans to the fiber

department in lump sum amounts as needed until the total loaned funds reach the TVA-approved amount. While funding the fiber lines of business in this manner does not appear to impose any additional level of risk on TVA, it increases the difficulty of tracking amounts spent on fiber and lends the appearance that the loan is not an arm's-length transaction.

Documentation of Loan Terms

Tullahoma was unable to provide any loan documents supporting the amounts provided to the fiber department by the electric department that indicated interest rates, payment terms, electric department recourse, etc. However, according to Tullahoma management, (1) they are recognizing interest monthly at the rate the electric department is able to receive on their other available cash investments; (2) no payment terms have been drawn up because they are not sure when payments can begin; and (3) the business plan provided to TVA anticipates repayment of the loan to begin in the sixth year of the plan. Without executed loan documents the electric department has no legal recourse to recoup the funds expended to establish the fiber optic lines of business.

CONTRACT COMPLIANCE ISSUES

Our review noted two areas where Tullahoma was not meeting the requirements of the power contract with TVA. Specifically, we found (1) inconsistent allocation of costs between service departments and (2) customers with demand above 50 kW without a contract. Below is further discussion on these items.

Allocation of Joint Costs

We noted one instance in which Tullahoma's accounting practices did not conform to the power contract with TVA. Under the power contract, the distributor is allowed to "use property and personnel jointly for the electric system and other operations, subject to agreement between Municipality and TVA as to appropriate allocations." Our review of allocations made during the audit period found the allocation percentages were not applied in accordance with the last TVA joint cost allocation study, which occurred in 1986, or applied consistently.

Discussions with Tullahoma personnel indicated several different methods for allocating costs had been employed over the past several years. In general, allocation percentages are determined at the beginning of the year through discussions between the General Manager and Administrative Manager. However, when large purchases are made which could benefit several departments, they are reviewed on a case-by-case basis and handled in the manner determined most appropriate. Additionally, while historical documentation regarding determination of allocation amounts to other departments for rental expenses was provided, no other documentation was available indicating how previous allocations of other expenses were determined. TVA approval of these allocations was not obtained by Tullahoma.

Customer Contract Issues

Our review of customer contracts found required contracts for Tullahoma customers with demand greater than 50 kW were not in place for all customers. Under Tullahoma's contract with TVA, all customers that exceed 50 kW monthly are required to sign a formal contract. We randomly selected 35 customers classified as GSA Part 2 or higher in the billing agency data and found 29 had billed demand in excess of 50 kW during the audit period indicating that a contract with the distributor was required. Of these 29, 15 did not have contracts with Tullahoma. We also performed additional testing to identify customer accounts with billed demand in excess of 50 kW during the audit period indicating that a contract with the distributor was required that lacked a contract demand entry in the billing system. In addition to those customers noted above, we identified another 102 customer accounts that did not have contracts with Tullahoma. The contract includes a contract demand which is used in placing the customer in the correct classification. For example, a customer becomes a GSA Part 2 when either (1) the customer's currently effective contract demand or its highest billing demand during the latest 12-month period is more than 50 kW but less than 1,000 kW, or (2) the customer's billing demand is less than 50 kW and its energy takings for any month during such period exceed 15,000 kWh. Contract demand is also used in calculating the customer's billed demand and minimum bill.

TVA management, in previous reports, indicated the threshold of 50 kW for requiring customer contracts was too low. TVA management will recommend to the Board that a new and higher threshold be established as part of the rate change process with the distributors.¹¹ In further discussions with TVA personnel, the proposed threshold for requiring a contract is one megawatt (MW). One of the customers in our testing exceeded the one MW demand threshold to be recommended by TVA management.

DISTRIBUTOR INTERNAL CONTROL ISSUE

We noted Tullahoma's internal controls regarding data changes could be strengthened to improve completeness, accuracy, and validity of the billing data. Specifically, we found (1) Tullahoma management was not reviewing an available report which shows, among other things, customer account changes, and (2) Tullahoma disabled the audit logging function of the billing system because of system performance issues.

We noted at least four people have the ability to make changes to a customer's rate class or rate classification amounts. The billing system has a report, "Calculation Exception Report," that provides listings of (1) high, low, or zero billing amounts, (2) accounts billed a minimum amount, (3) all accounts that have

¹¹ When the rate change is put into effect, all retail customers above the new threshold will be expected to have executed contracts. Target completion date will coincide with the rate change efforts that are currently under way with the distributors and is expected to be in place by October 2010.

changed rate classes from the last billing period, (4) all prorated bills, and (5) accounts that have been edited repeatedly. According to Tullahoma management, billing personnel run this report but it is not being reviewed and approved by management.

Tullahoma management indicated the audit logging function was disabled because of system performance issues. Based on our discussions with billing agency personnel, other than the report noted above, the audit logging function is the only tool available to allow management to review changes to customer accounts and system settings. Other discussions with billing agency personnel indicated the audit log could be archived at specified timeframes to keep the log from impacting system performance.

TVA OVERSIGHT OPPORTUNITIES

We found opportunities to enhance TVA's oversight of this distributor; however, the issues noted for this distributor were the same as those reported in previous Office of the Inspector General (OIG) distributor reports. Specifically, we noted TVA has not:

- Performed a joint cost study in over 20 years when the TVA Accountant's Manual calls for one to be performed every three to four years or when major changes occur that affect joint operations,
- Adequately defined the process for granting the Small Manufacturing Credit to ensure proper documentation, including evidence of approval, is submitted and maintained,
- Provided adequate guidance on when a demand meter is required,
- Provided definitive guidance for distributors on what constitutes prudent expenditures, and
- Defined criteria for evaluating when a distributor's cash is excessive.

In response to the previous reports, TVA agreed to take corrective actions on these issues. Full discussion of these issues and TVA's planned actions can be found in prior OIG distributor reports on our Web site, www.oig.tva.gov.

RECOMMENDATIONS

We recommend the Group President, Strategy and External Relations, work with Tullahoma to improve compliance with the contract and/or strengthen internal controls. Specifically, Tullahoma should:

1. Develop procedures to identify customers that are misclassified as residential when the location has been modified for use as a commercial business and when there are separate services associated with a residence that should be classified as commercial.

Tullahoma's Response – Tullahoma has worked with the billing company and resolved these classification and billing issues. All customer classifications have been corrected. See Appendix A for Tullahoma's complete response.

TVA Management's Comments – TVA agreed with the recommendation and noted Tullahoma has worked with the billing agency to resolve classification and billing issues. See Appendix B for TVA's complete response.

Auditor's Response – The OIG concurs with the actions taken to correct the identified classification and billing issues. However, the response from Tullahoma did not address the development of procedures for identification of misclassified customers for the future. We believe Tullahoma should look at instituting such procedures to reduce the risk of similar instances recurring in the future.

2. Review the 17 customers with usage in excess of 15,000 kWh to determine if any should have demand meters installed.

Tullahoma's Response – Tullahoma has confirmed all 17 customers are below 50 kW and are in the process of installing demand meters on any customer that is close to the GSA Part 2 classification to ensure demand is billed when necessary. Tullahoma stated the billing software is programmed to move customers into the next higher classification any time they exceed the limits of the lower classification and Tullahoma is confident this works. See Appendix A for Tullahoma's complete response.

TVA Management's Comments – TVA agreed with the recommendation and noted Tullahoma has reviewed and confirmed all 17 customers are below the 50 kW threshold and are being billed correctly. See Appendix B for TVA's complete response.

Auditor's Response – The OIG concurs with the actions taken, and no further action is necessary.

3. Implement a procedure to (1) identify and document those customers that have circumstances (i.e., maximum load for the installed electrical configuration) which would never allow the customer to reach the 50 kW threshold and (2) routinely monitor demand or place demand meters at customer service addresses where usage could potentially reach the demand threshold.

Tullahoma's Response – Tullahoma is in the process of installing demand meters on customers that might fall into this classification. See Appendix A for Tullahoma's complete response.

TVA Management's Comments – TVA agreed that distributors should monitor demand to be sure they comply with the GSA rate schedule requirements and noted Tullahoma is in the process of installing demand meters on customers that might fall into this classification. In addition, TVA will provide guidance to distributors advising they evaluate the installation of a demand meter once a customer's monthly usage exceeds 25,000 kWh. See Appendix B for TVA's complete response.

Auditor's Response – The OIG concurs with the planned actions.

4. Execute loan documents between the electric department and fiber department for the \$800,000 loan amount and \$2.2 million line of credit that include interest rates to be paid by the fiber department, terms for payback, recourse available to the electric department if fiber is unable to make payment on a timely basis, and any other protections available to the electric rate payer.

Tullahoma's Response – Tullahoma did not initially set up these documents but did record all necessary information and transactions to track the loan of money to the fiber department. Tullahoma will set up the formal documents in conjunction with TVA accounting personnel. See Appendix A for Tullahoma's complete response.

TVA Management's Comments – TVA agreed with the recommendation and noted TVA staff will work with Tullahoma to formalize the terms and conditions of the loan and line of credit. See Appendix B for TVA's complete response.

Auditor's Response – The OIG concurs with the planned actions.

5. Until a joint cost study is performed, document methods used to determine allocation percentages for all shared expenses, maintain documentation of approval for the method for a reasonable period of time, and obtain approval for the allocations from TVA.

Tullahoma's Response – TVA and Tullahoma plan to refresh the joint cost allocations for Tullahoma in 2010 and agree on any changes required. There is documentation in the form of history that shows the annual changes in the allocations, and this history will show the electric department is paying less each year of the total cost shared for the distributor. See Appendix A for Tullahoma's complete response.

TVA Management's Comments – TVA agreed with the recommendation and noted TVA and Tullahoma plan to refresh the joint cost allocations in FY 2010 and agree on any changes required. See Appendix B for TVA's complete response.

Auditor's Response – The OIG concurs with planned actions; however, we maintain Tullahoma should document current allocation methodology for all shared expenses and maintain documentation of both management and TVA approval until a new joint cost study is completed.

6. Work with their billing agency to identify a method for using the audit logging function, reviewing the log for significant changes made to customer or system data, and copying the data to a new file on a monthly or quarterly basis to avoid system performance issues.

Tullahoma's Response – Tullahoma was able to determine that the audit system is still tracking important information, such as changes to customer accounts. Tullahoma plans to restart the full audit system and move the files to another location to not cause performance problems with the system. See Appendix A for TVA's complete response.

TVA Management's Comments – TVA has been unable to determine the benefit to TVA or ratepayers in accepting this recommendation and will defer to Tullahoma's determination regarding its own internal processes related to this recommendation. See Appendix B for TVA's complete response.

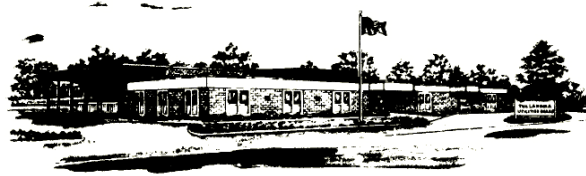
Auditor's Response – The OIG concurs with the planned actions.

7. Review the Calculation Exception report for appropriateness after bill calculation and approve prior to bills being generated.

Tullahoma's Response – Tullahoma stated the exception report is being reviewed by billing personnel. Management has not had the time to review these reports each time bills are calculated. There are two employees working in billing who have been doing the reviews for more than 20 years with no problems, and management can see no reason they should not perform this function with management oversight. See Appendix A for Tullahoma's complete response.

TVA Management's Comments – TVA has been unable to determine the benefit to TVA or ratepayers in accepting this recommendation and will defer to Tullahoma's determination regarding its own internal processes related to this recommendation. See Appendix B for TVA's complete response.

Auditor's Response – The OIG recognizes review of the exception report by billing personnel is a good business practice; however, we maintain Tullahoma's internal controls would be strengthened by periodic review of this exception report by management.



TULLAHOMA UTILITIES BOARD
POWER WATER AND SEWERAGE SYSTEMS

PHONE 931-455-4515

901 SOUTH JACKSON STREET
TULLAHOMA, TENNESSEE 37388

P. O. BOX 788

December 17, 2009

Robert E. Martin, ET 3C-K
TVA

RESPONSE TO DRAFT AUDIT REPORT 2008-12042 – DISTRIBUTOR REVIEW OF
TULLAHOMA UTILITIES BOARD

This is in response to your memorandum dated November 30, 2009.

Agreement or disagreement with all facts, conclusions and recommendations are stated first, followed by the actions planned or taken and completion dates for each of the recommendations. *Distributor response in italics.*

1. Develop procedures to identify customers that are misclassified as residential when the location has been modified for use as a commercial business and when there are separate services associated with a residence that should be classified as commercial.
 - **Actions taken or planned, and completion dates:** *Distributor has worked with its billing company, Local Government Data Processing Corporation (LGDPC) and resolved these classification and billing issues. All customer classifications have been corrected.*

2. Review the 17 customers with usage in excess of 15,000 kWh to determine if any should have demand meters installed.
 - **Actions taken or planned, and completion dates:** *Distributor has confirmed that all 17 customers are below the 50 kW and are being billed correctly. Our billing software is programmed to move any customer into the next higher GSA classification any time they exceed the limits of the lower classification, and we know it works. It moves the customer up and keeps them there for a period of one year from the date of the last time the increased measurement was detected. We are going back to install demand meters on any customer that is close to the GSA Part 2 classification to insure that demand is billed if they exceed the 50 kW.*

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3. Implement a procedure to (1) identify and document those customers that have circumstances (i.e., maximum load for the installed electrical configuration) which would never allow the customer to reach the 50 kW threshold and (2) routinely monitor demand or place demand meters at customer service addresses where usage could potentially reach the demand threshold.
 - **Actions planned or taken, and completion dates:** *Distributor is in the process of installing demand meters on customers that might fall into this classification. In addition, TVA will provide guidance to all distributors and advise that they evaluate the installation of a demand meter once a customer's monthly usage exceeds 25,000 kWh since it is probable that such a customer would meet the 50 kW thresholds for demand charges for GSA Part 2 customers. A distributor should also consider factors such as the nature of the customer's business, operating patterns, electrical equipment and building specifications when considering the installation of a demand meter.*

4. Execute loan documents between the electric department and fiber department for the \$800,000 loan amount and \$2.2 million line of credit that include interest rates to be paid by the fiber department, terms for payback, recourse available to the electric department if fiber is unable to make payment on a timely basis, and any other protections available to the electric rate payer.
 - **Actions planned or taken, and completion dates:** *Distributor did not initially set up these documents, but did record all necessary information and transactions to track the loan of money to the fiber department. Distributor will set up the formal documents in conjunction with TVA accounting personnel. The terms are simple. Electric department may loan up to the approved \$3,000,000 to fiber department at the monthly rate electric department is receiving on its money invested otherwise. The recourse to the electric department if not paid back in a reasonable time period is to take the outside fiber plant and use it for the smart grid/AMI system that will be needed for future billing. The value is in excess of the loan limit approved.*

5. Until a joint cost study is performed, document methods used to determine allocation percentages for all shared expenses, maintain documentation of approval for the method for a reasonable period of time, and obtain approval for the allocations from TVA.
 - **Actions planned or taken, and completion dates:** *TVA and distributor plan to refresh the joint cost allocations for the Tullahoma Utilities Board in 2010 and agree on any changes required. There is documentation in the*

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form of history that shows the annual changes in the allocations and this history will show that the electric department is paying less each year of the total cost shared for the distributor. Our situation has changed rapidly in the last few years with the addition of the fiber department and even though TVA was not requested to approve the changes, it has always been on an equitable basis and has been to the benefit of the electric department.

6. Work with their billing agency to identify a method for using the audit logging function, reviewing the log for significant changes made to customer or system data, and copying the data to a new file on a monthly or quarterly basis to avoid system performance issues.

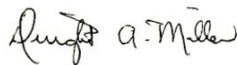
Actions planned or taken, and completion dates: *Distributor was able to determine that the audit system is still tracking important information such as changes to customer accounts. What the audit system was doing before being turned off was tracking every key stroke entered in the system. It is planned to restart the full audit system and move the files to another location so as to not cause performance problems with the system.*

7. Review the Calculation Exception report for appropriateness after bill calculation and approve prior to bills being generated.

Actions planned or taken, and completion dates: *As noted, the exception report is being reviewed by billing personnel. Management has not had the time to review all of these reports every time bills are calculated. There are two employees working in billing that have been doing the reviews for more than 20 years with no problems and Management can see no reason that they should not perform this function with management oversight.*

Tulahoma Utilities Board

Dwight A. Miller



Administrative Manager

December 23, 2009

Robert E. Martin, ET 3C-K

RESPONSE TO DRAFT AUDIT REPORT 2008-12042 – DISTRIBUTOR REVIEW OF
TULLAHOMA UTILITIES BOARD

This is in response to your memorandum dated November 30, 2009.

Agreement or disagreement with all facts, conclusions and recommendations are stated first, followed by the actions planned or taken and completion dates for each of the recommendations.

1. Develop procedures to identify customers that are misclassified as residential when the location has been modified for use as a commercial business and when there are separate services associated with a residence that should be classified as commercial.
 - TVA management agrees that the Power Contract requires consistent classification of customers in accordance with the applicable rate schedule.
 - **Actions taken or planned, and completion dates:** Distributor has worked with its billing company, Local Government Data Processing Corporation (LGDPC) and resolved these classification and billing issues.
2. Review the 17 customers with usage in excess of 15,000 kWh to determine if any should have demand meters installed.
 - TVA management agrees that Distributors should monitor demand to be sure that they comply with the GSA rate schedule requirements. The rate schedule states, "Distributor shall meter the demands in kW of all customers having loads in excess of 50 kW."
 - **Actions taken or planned, and completion dates:** TVA will encourage the Distributor to develop such procedures as a matter of good business practice. The Distributor reviewed and confirmed that all 17 customers are below the 50kW threshold and are being billed correctly. (See response for recommendation no. 3 below).
3. Implement a procedure to (1) identify and document those customers that have circumstances (i.e., maximum load for the installed electrical configuration) which would never allow the customer to reach the 50 kW threshold and (2) routinely monitor demand or place demand meters at customer service addresses where usage could potentially reach the demand threshold.


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- TVA management agrees that distributors should monitor demand to be sure that they comply with the GSA rate schedule requirements. Such guidance is provided in the Determination of Demand section of the GSA Rate Schedule. Said schedule states, "Distributor shall meter the demands in kW of all customers having loads in excess of 50kW."
 - **Actions planned or taken, and completion dates:** The Distributor is in the process of installing demand meters on customers that might fall into this classification. In addition, TVA will provide guidance to all distributors and advise that they evaluate the installation of a demand meter once a customer's monthly usage exceeds 25,000 kWh since it is probable that such a customer would meet the 50 kW thresholds for demand charges for GSA Part 2 customers. A distributor should also consider factors such as the nature of the customer's business, operating patterns, electrical equipment and building specifications when considering the installation of a demand meter.
4. Execute loan documents between the electric department and fiber department for the \$800,000 loan amount and \$2.2 million line of credit that include interest rates to be paid by the fiber department, terms for payback, recourse available to the electric department if fiber is unable to make payment on a timely basis, and any other protections available to the electric rate payer.
- TVA management agrees that formal loan documents should be executed for the \$800,000 loan and \$2.2 million line of credit that includes interest rates and terms of payback that were negotiated when the loan and line of credit were set up.
 - **Actions planned or taken, and completion dates:** TVA staff will work with the Tullahoma personnel to formalize the terms and conditions of the loan and line and credit. Target completion date for this action is October 31, 2010.
5. Until a joint-cost study is performed, document methods used to determine allocation percentages for all shared expenses, maintain documentation of approval for the method for a reasonable period of time, and obtain approval for the allocations from TVA.
- TVA management agrees that until a joint-cost study is performed, Tullahoma should document methods used to determine allocation percentages for all shared expenses, maintain documentation of approval

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for the method for a reasonable period of time, and obtain approval for the allocations from TVA.

- **Actions planned or taken, and completion dates:** TVA and Distributor plan to refresh the joint-cost allocations for the Tullahoma Utilities Board in Fiscal Year 2010 and agree on any changes required.
6. Work with their billing agency to identify a method for using the audit logging function, reviewing the log for significant changes made to customer or system data, and copying the data to a new file on a monthly or quarterly basis to avoid system performance issues.
- There is no indication that the procedures used by Distributor with respect to the audit logging function have caused any billing discrepancies or errors. TVA has been unable to determine the benefit to TVA or ratepayers in accepting this recommendation and will defer to the Distributor's determination regarding its own internal processes related to this recommendation.
7. Review the Calculation Exception report for appropriateness after bill calculation and approve prior to bills being generated.
- There is no indication that the procedures used by Distributor with respect to use of the Calculation Exception report have caused any billing discrepancies or errors. TVA has been unable to determine the benefit to TVA or ratepayers in accepting this recommendation and will defer to the Distributor's determination regarding its own internal processes related to this recommendation.


Kimberly S. Greene
Chief Financial Officer and
Executive Vice President, Financial Services
WT 7B-K

VB: JSE

cc: See list on page 4

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cc: Peyton T. Hairston Jr., WT 7B-K
John P. Kernodle, WT 6A-K
John E. Long, Jr., WT 7B-K
Jill M. Matthews, ET 3C-K
Richard W. Moore, ET 4C-K
John M. Thomas III, WT 4B-K
John G. Trawick, WT 3D-K
Benny R. Wagner, ET 4C-K
EDMS