



Memorandum from the Office of the Inspector General

September 30, 2011

TVA Board of Directors

FINAL REPORT – EXTERNAL PROJECT 2009-13007-01 – HISTORY, STATUS, AND ALTERNATIVES: TVA FINANCIAL FLEXIBILITY

Attached is our final report on our review of TVA's financial flexibility. This report is for information purposes only; therefore, no response is necessary.

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

If you have any questions or wish to discuss this report, please contact me at (865) 633-7300.

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Attachment

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OIG File No. 2009-13007-01



History, Status, and Alternatives: TVA Financial Flexibility



ACRONYMS AND ABBREVIATIONS

CEO	Chief Executive Officer
CY	Calendar Year
DSC	Debt Service Coverage
EEDR	Energy Efficiency and Demand Response
EPW	Environment and Public Works
FY	Fiscal Year
GAO	Government Accountability Office
GHG	Greenhouse Gas
IOUs	Investor-Owned Utilities
OGC	Office of the General Counsel
OIG	Office of the Inspector General
OMB	Office of Management and Budget
SEC	Securities and Exchange Commission
SPE	Special Purpose Entity
TFC	Total Financing Cost
TFOs	Total Financing Obligations
TVA	Tennessee Valley Authority
TVARS	Tennessee Valley Authority Retirement System

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KIMBERLY S. GREENE AND JOHN M. THOMAS TO RICHARD W.
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EXECUTIVE SUMMARY

Tennessee Valley Authority (TVA) faces a challenging financial situation in the near future. The company is making significant investments to improve the condition of existing assets, bring new ones on-line, and comply with environmental regulations. At the same time, TVA is approaching a statutorily imposed debt ceiling of \$30 billion,¹ a major impediment to making needed investments. TVA currently projects that it will have accumulated approximately \$27.4 billion in debt and debt-like instruments in fiscal year (FY) 2012. Furthermore, in light of the nation's current weak economy and TVA's increased borrowings being considered part of the federal deficit, TVA could have difficulties in getting the debt ceiling raised.

Although TVA's historical mission has not changed, the environment in which TVA does business has evolved. Among other things, TVA must cope with challenging economic conditions, increased environmental standards, and the need to modernize its generating system. In August 2010, the TVA Board of Directors adopted a new strategic vision (Vision) that will help TVA lead the Tennessee Valley region toward a cleaner and more secure energy future, relying more on nuclear power and energy efficiency and renewable energy and less on coal-fired generation. TVA's new Vision will require financing of some large projects that will impact TVA's debt ceiling.

The Office of the Inspector General (OIG) views this impending financial situation as one that will require careful consideration by TVA management, the Board of Directors, and congressional and administration officials. TVA is fast approaching a crossroads. The amount of TVA's debt and debt-like instruments, the debt ceiling, projected capital needs, and statements from TVA executives make it clear that TVA may experience issues with its ability to adequately fund operations, maintenance, and capital projects without increasing the debt ceiling, raising rates, or choosing among options like the ones we describe in this report. Although the exact timing of this financial dilemma is unknown, there is little doubt that it will occur at some point in the near term. Therefore, OIG undertook this review to identify alternatives for the TVA Board and executives to consider without advocating any particular option. This report also includes a detailed historical review that is included in the Appendix.

Specifically, our objectives were to assess (1) TVA's financial flexibility, given its current statutory debt and other alternate financing, and (2) some of the alternatives that exist for TVA to meet its future financing needs.

Additionally, it is important to note that in the aftermath of the Kingston coal ash spill of December 22, 2008, TVA has committed to being a more transparent agency. This OIG report on financial flexibility presents an opportunity for TVA to continue its commitment to transparency on issues that affect TVA stakeholders. The TVA Board and TVA management have encouraged our efforts to present a fact-based report for consideration by TVA's stakeholders, and we appreciate their input in this process.

We requested and received comments from TVA management on a draft of this report. These comments are included in their entirety at Appendix B. In general, management offered clarification on certain items or provided additional information for emphasis. We made changes to the final report, based on management's comments, as appropriate.

¹ Section 15d. (a) of the TVA Act (16 U.S.C. § 831) provides, "[t]he Corporation is authorized to issue and sell bonds, notes and other evidences of indebtedness (hereinafter collectively referred to as "bonds") in an amount not exceeding \$30,000,000,000 outstanding at any one time to assist in financing its power program and to refund such bonds."

SUMMARY OBSERVATIONS

TVA has a long, rich history filled with change and controversy. TVA's many supporters can cite ample examples of its contributions not only to the Tennessee Valley but also to the nation. As this report's historical survey notes (see the Appendix), TVA has evolved into a self-financing organization that issues bonds in the financial markets. As the Tennessee Valley region has grown, so have TVA's capital needs. The current ceiling on its authority to issue bonds, set in 1979, stands at \$30 billion. When adjusted based on historical Consumer Price Indices, this debt ceiling is equivalent to more than \$90 billion in 2010 dollars. In other words, since 1979, inflation has reduced the purchasing power of the debt ceiling by almost two-thirds, to approximately \$10 billion in 1979 dollars. The following observations are factors to be considered in evaluating the alternative strategies. These factors are discussed more fully in the report.

TVA's Debt Reduction Efforts

TVA has undertaken debt reduction efforts in the past but has made limited progress compared with its publicly announced goals. Since 2005, there have been efforts to transform TVA's business structure to increase accountability and oversight by changing the TVA Board from three full-time members to nine part-time members, establishing a Chief Executive Officer position to supervise its day-to-day activities, and filing financial reports with the Securities and Exchange Commission (SEC). In addition, the TVA Board has established a set of financial principles to bring a new level of discipline to TVA's decision making and ensure continued financial health. TVA maintains that the use of debt is consistent with several financial guiding principles, including the principles that new debt should be used only to fund new generation investments and that debt should be repaid before the end of the useful life of the assets, while operating costs and maintenance of the existing power system should be funded out of revenues. According to TVA, financing new generation with debt results in a lower cost to TVA's current ratepayers and aligns repayment of generation investment obligations with the consumers who will benefit from those assets.

Current State of TVA's Financing

TVA's current total financing obligations (TFOs) include statutory debt, energy prepayments, and leaseback obligations. TVA's statutory debt balance as of September 30, 2010, was \$23.4 billion, with an additional \$2.2 billion in energy prepayments and leaseback obligations. For financial planning purposes, TVA currently uses an internal borrowing limit of \$28 billion in statutory debt to provide for the unexpected. TVA regularly reports all of its liabilities, including leases and prepayments, according to generally accepted accounting principles, in external financial reports filed with the SEC, and provided to Office of Management and Budget (OMB) and the Congressional Budget Office.

Challenges Facing TVA

TVA faces many challenges, including an aging fossil fleet, increased environmental regulations, and a pending pension shortfall. TVA prefers to address these challenges before reaching the \$30 billion cap for statutory debt. As discussed below, one alternative to meet these challenges is to increase the debt ceiling. However, increasing the debt ceiling above the current \$30 billion limit would lead to a greater amount of debt for TVA. Furthermore, while this could be perceived negatively in the current weak economy and foster uncertainty about how higher debt levels can be sustained, debt is also TVA's lowest cost form of financing.

According to the Office of the General Counsel (OGC), because of federal budgetary principles, TVA's expenditure of increased borrowings is presented in the budget as being equivalent to TVA's receipt

and expenditure of congressional appropriations and would cause an equal increase in the overall federal budget deficit that currently exists. Thus, Congress' current mission to reduce the federal deficit, coupled with resistance from those who generally oppose a debt ceiling increase, could be a constraint to TVA's success in getting the debt ceiling increased.

TVA's Debt Comparison With Other Utilities

Although TVA is often compared with investor-owned utilities (IOUs), comparing their debt levels does not provide much value because of the differences in their operating characteristics. Specifically, the TVA Act requires that TVA sell power at the lowest rates feasible, whereas IOUs operate to maximize shareholder earnings. In addition, both TVA and IOUs can fund capital projects through raising rates, issuing debt, or retained earnings, but IOUs can also issue stock. As a result of these differences, TVA compares unfavorably with other utilities when focusing on debt alone.

Financing Strategy Alternatives

TVA currently uses multiple options to finance operations including increasing rates, issuing debt (subject to ceiling), prepay arrangements for power sales, and other alternative financing arrangements such as leaseback agreements. Additionally, TVA makes key decisions to minimize financing requirements by (1) anticipating business growth, (2) evaluating the necessity of capital outlays and deferring those decisions when appropriate, (3) maintaining purchase power agreements to handle peak demand periods, and (4) engaging in a demand reduction program to reduce the need for new capacity. TVA periodically considers other financing options including (1) distributor-owned generation and (2) partnering arrangements. These options are reviewed to determine whether they are economically feasible considering how they increase TVA's risk or how they transfer TVA's risk to others. Other options may exist that are less feasible including issuing securities and seeking congressional appropriations for federal mandates such as clean air compliance. These options are more drastic measures and require congressional approval. This report includes more detailed discussions on the various strategies available to TVA.

Conclusions

As previously noted, TVA's challenges are great with the need for financial flexibility to ensure the TVA mission of delivering low cost power is achieved. The current debt ceiling could limit TVA's financial flexibility and require TVA to seek higher cost financing options or require significant rate increases that could adversely affect the economic development of the Tennessee Valley region. Although TVA is in the process of evaluating options, TVA's position is that a financial metric (e.g., something similar to the debt service coverage (DSC) ratio), rather than a debt ceiling stated in terms of an arbitrary dollar amount, would provide control of TVA's borrowing authority that is tied to TVA's ability to pay outstanding debt, similar to IOUs, while still providing Congress with oversight and control.

The Inspector General agrees with TVA management in their efforts to maintain maximum financial flexibility including (1) the adoption of sound financial principles, (2) ensuring multiple options and strategies are pursued to achieve the most economical approach, and (3) seeking to ensure that debt remains a viable option in future financing decisions.

TVA should be able to support additional debt to help meet energy demands as long as TVA uses the debt proceeds to successfully build generating capacity, the TVA Board maintains its ratemaking authority, and TVA maintains its service territory and customer base.

BACKGROUND OBSERVATIONS

TVA's Debt Reduction Efforts

TVA's current debt ceiling of \$30 billion has not changed since 1979. Over the years, TVA has initiated several efforts to reduce its statutory debt and alternative financing obligations. According to a Government Accountability Office (GAO) report² issued in August 2006, TVA's most recent major efforts to reduce its TFOs³ are as follows:

- In July 1997, TVA issued a ten-year business plan that included steps to improve its financial position. Two key objectives of this plan were: "(1) to reduce the cost of power by reducing debt and the corresponding financing costs, and (2) to increase financial flexibility by reducing fixed costs." The plan called for TVA to reduce its debt by half, to about \$13.2 billion, over ten years by increasing its electricity rates beginning in 1998, reducing certain expenses, and limiting capital expenditures. However, TVA did not meet this goal because it used cash intended for debt reduction to cover greater than estimated annual operating costs and capital expenditures. TVA reduced TFOs by only \$975 million from 1997 through 2003.
- In 2004, TVA's Board adopted a new strategic plan for reducing its statutory debt by \$3 billion to \$5 billion. TVA subsequently expanded this debt reduction effort to also include other components of its TFOs, namely obligations related to leasebacks and energy prepayment arrangements. Thus, TVA's 2007 budget submission set a new goal to reduce TFOs by \$7.1 billion by FY 2015. This included reducing statutory debt by \$6.7 billion and alternative financing obligations by \$0.4 billion. At the time, TVA planned to achieve this goal by "increasing revenue, controlling the growth of its operating expenses, and limiting capital expenditures." TVA projected that it would gain additional revenue through an October 2005 rate increase and increased sales from growth for the demand for electricity. According to TVA, a fuel cost adjustment process has been put in place to adjust rates more frequently to accommodate fuel cost volatility and avoid larger, less frequent adjustment for fuel costs.

According to the GAO report, TVA planned to reduce its TFOs by \$3.4 billion from FY 2004 through FY 2010. Based on our review of TVA's financial statements for that time period, we determined that TVA fell short of its FY 2010 TFO reduction goal by \$3.1 billion.

Although TVA has not been successful in achieving its debt reduction goals, its debt ceiling has remained at \$30 billion since 1979 and has not been adjusted for inflation since then.⁴ Within these constraints, TVA's business has grown, and environmental spending requirements have increased. TVA has continued to add generating capacity to the system, as its customer base has increased. According to information provided by TVA personnel, TVA has added 12,212 megawatts of generating capacity to the system since 1979 at a cost of \$14.1 billion. This additional generating capacity represents an increase of approximately 55 percent over the generating capacity that was available in 1979. TVA's customer base has increased by about 66 percent since 1979. Finally, TVA has spent about \$5 billion on environmental projects since 1979.

² Plans to Reduce Debt While Meeting Demand for Power, GAO-06-810.

³ As noted below, TVA's TFOs include statutory debt, energy prepayments, and leaseback obligations.

⁴ By applying the average annual Consumer Price Indices on a cumulative basis for 1980 through 2010, TVA's \$30 billion debt ceiling in 1979 dollars is equivalent to more than \$90 billion in 2010 dollars.

“Since 1979, TVA’s customer base has increased by about 66 percent while increasing generating capacity by approximately 55 percent.”

Corporate Governance and Financial Flexibility

Since 2005, there have been efforts to transform TVA’s business structure to increase accountability and oversight by (1) changing the TVA Board from three full-time members to nine part-time members, (2) establishing a Chief Executive Officer position to supervise its day-to-day activities, and (3) filing financial reports with the SEC. In addition, according to written testimony⁵ by TVA’s Chief Financial Officer to Congress, the TVA Board established a set of financial guiding principles in its 2007 Strategic Plan to bring a new level of discipline to TVA’s decision making and ensure continued financial health. These principles, recently updated and endorsed by the Board, call for TVA to use debt to finance new generation investments. They are:

- Retire debt over the useful life of assets.
- Only issue new debt for new assets.
- Use regulatory accounting treatment for specific unusual events.
- Increase rates as necessary to fund operational spending.
- Evaluate rate actions to avoid significant rate volatility.
- Implement rate actions to maintain financial flexibility.

“TVA’s Board established these guiding principles to ensure TVA’s continued financial health.”

According to TVA, the next step in its business transformation is to replace TVA’s debt limit with a financial metric (e.g., something similar to the DSC ratio). Although TVA is still evaluating options, TVA’s position is that a financial metric, rather than a debt ceiling stated in terms of an arbitrary dollar amount, would provide control of TVA’s borrowing authority that is tied to TVA’s ability to pay outstanding debt, similar to IOUs, while still providing Congress with oversight and control.

Congressional Oversight

TVA’s jurisdictional committees with primary oversight in the federal government are the Senate Environment and Public Works Committee and the House of Representatives Transportation and Infrastructure Committee. In the Senate, the Environment and Public Works Committee’s Clean Air and Nuclear Safety Subcommittee has jurisdiction, and in the House, the Transportation and Infrastructure Subcommittee on Water Resources and Environment has jurisdiction. In addition, OMB reviews TVA’s budget and operations throughout the year, and GAO performs periodic reviews of various aspects of TVA at the request of Congress.⁶

In March 1994, the Subcommittee on Investigations and Oversight of the House Committee on Public Works and Transportation held a hearing on TVA that raised concerns about its nuclear program and growth of its debt toward the \$30 billion debt ceiling. At the time of the hearing, TVA was seven

⁵ Written testimony of John Madison Thomas III, Chief Financial Officer, Tennessee Valley Authority, as submitted to the U.S. House Committee on Transportation and Infrastructure Subcommittee on Water Resources and Environment, March 8, 2011.

⁶ TVA’s OIG provides semiannual reports to Congress concerning audits, inspections, and investigations of TVA operations and personnel.

years into a ten-year period of no base rate increases. At the request of several Congress members, GAO examined the implications for TVA and possibly the federal government of TVA's financial condition, and in August 1995, it issued a report about TVA's financial situation, GAO/AIMD/RCED-95-134, *Financial Problems Raise Questions about Long-Term Viability*. GAO found that TVA had more financing costs and deferred assets than its competitors, which gave it little flexibility to be competitive.

As discussed above, TVA's debt ceiling was increased in 1979 by \$15 billion to \$30 billion primarily for the purpose of constructing nuclear generation. But TVA subsequently abandoned many of the nuclear projects that the increase would have financed because of lower-than-anticipated growth. In the years following this debt ceiling increase, TVA's financial condition worsened, largely as the result of construction delays, cost overruns, and operational shutdowns in its nuclear program. As shown in Table 2, TVA's debt and debt-like instruments increased to a peak of more than \$27 billion in FY 1996.

In their response to our draft, TVA management stated that it is important to highlight TVA's repayment of its original power system investment, as well as the additional "return" payments made by TVA on the remaining balance of that investment. Specifically, TVA stated that of the \$1 billion amount of investment that TVA is required to repay, only \$70 million remained unpaid as of September 30, 2010. TVA management further provided that by 2014 TVA will have paid more than \$3.6 billion to the U.S. Treasury and will continue making payments on the remaining \$258 million power program investment.

CURRENT STATE OF TVA'S FINANCING

TVA's Total Financing Obligations

Currently, TVA has three categories of debt and debt-like obligations, collectively referred to as TFOs: (1) statutory debt, (2) energy prepayments, and (3) leaseback obligations. As Table 1 shows, TVA's statutory debt balance has decreased by nearly \$3.5 billion since September 30, 1997. However, to fund certain capital requirements, TVA implemented an energy prepayment program for its distributors in FY 2003 and began entering into lease-leaseback transactions in FY 2000. Energy prepayments and leaseback obligations are referred to as alternative financing arrangements.

“TVA's total financing obligations have declined by about \$1.3 billion since 1997 and statutory debt declined by \$3.5 billion during that same period.”

Table 1. TVA's total financing obligations (\$ in billions)

Date	Statutory Debt	Leaseback Obligations	Energy Prepayments	Total Financing Obligations
September 30, 2010	\$23.4	\$1.4	\$0.8	\$25.6
September 30, 2009	\$22.6	\$1.4	\$0.9	\$24.9
September 30, 2008	\$22.6	\$1.4	\$1.0	\$25.0
September 30, 2007	\$22.6	\$1.1	\$1.1	\$24.8
September 30, 2006	\$22.9	\$1.1	\$1.2	\$25.2
September 30, 2005	\$22.9	\$1.1	\$1.4	\$25.4
September 30, 2004	\$23.3	\$1.2	\$1.4	\$25.9
September 30, 2003	\$24.6	\$1.2	\$0.1	\$25.9
September 30, 2002	\$24.8	\$0.6	-	\$25.4
September 30, 2001	\$24.8	\$0.3	-	\$25.1
September 30, 2000	\$25.4	\$0.3	-	\$25.7
September 30, 1999	\$25.9	-	-	\$25.9
September 30, 1998	\$26.3	-	-	\$26.3
September 30, 1997	\$26.9	-	-	\$26.9

Statutory Debt

Per TVA, TVA's statutory debt includes power bonds and discount notes issued pursuant to Section 15d of the TVA Act, which are subject to the current \$30 billion ceiling. According to TVA's FY 2010 Form 10-K filed with the SEC:

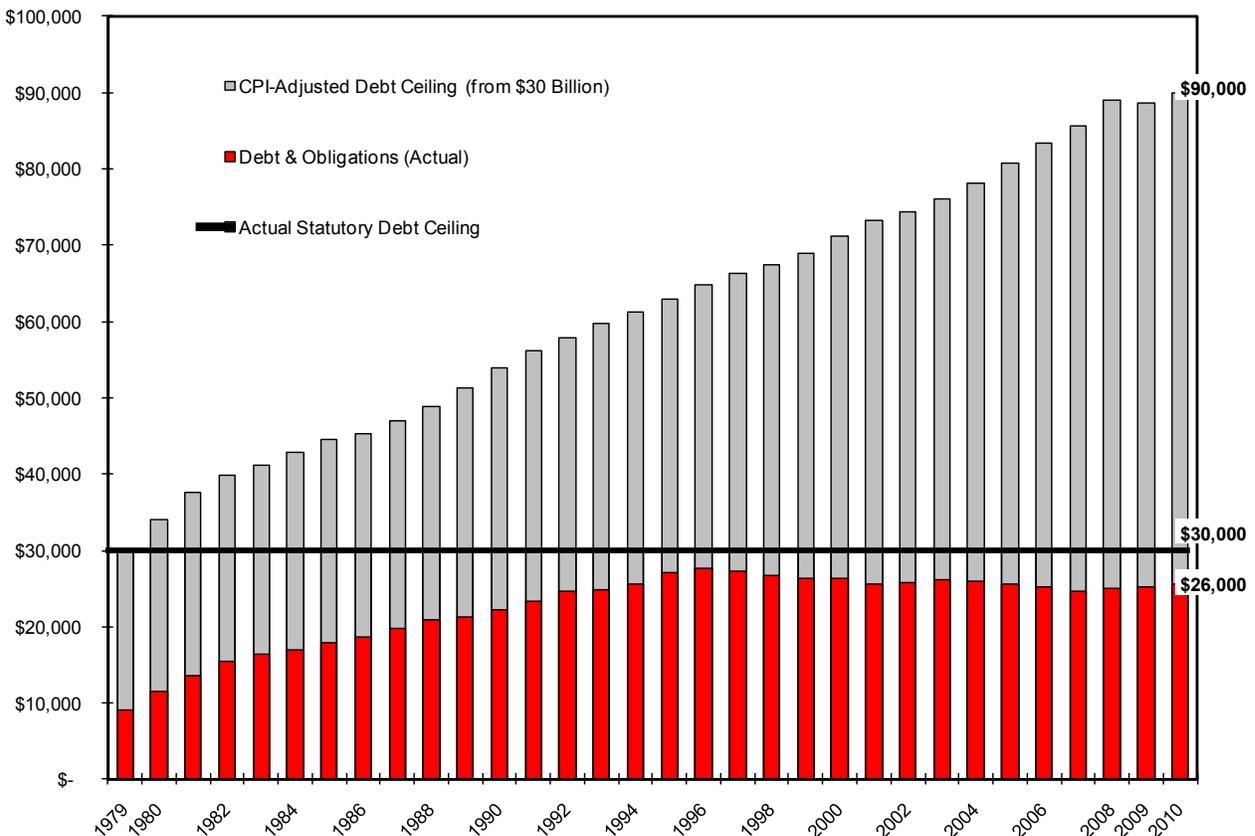
[TVA] Power bonds have maturities of between one and 50 years, and discount notes have maturities of less than one year. Power bonds and discount notes have a first priority and equal claim of payment out of net power proceeds. Net power proceeds are defined as the

remainder of TVA's gross power revenues after deducting the costs of operating, maintaining, and administering its power properties and payments to states and counties in lieu of taxes, but before deducting depreciation accruals or other charges representing the amortization of capital expenditures, plus the net proceeds from the sale or other disposition of any power facility or interest therein.

As of September 30, 2010, TVA's statutory debt totaled \$23.4 billion. Table 2 shows the effects of inflation on the \$30 billion debt ceiling from 1979 through 2010. TVA forecasts a statutory debt balance of \$24.3 billion and an alternative financing balance of \$2 billion by September 30, 2011.

“The 1979 \$30 billion debt ceiling, if adjusted for inflation, would be \$90 billion in 2010 dollars. The purchasing power of the 1979 \$30 billion debt ceiling is only \$10 billion.”

Table 2. TVA's 1979 Debt Ceiling, CPI-Adjusted (in Millions)



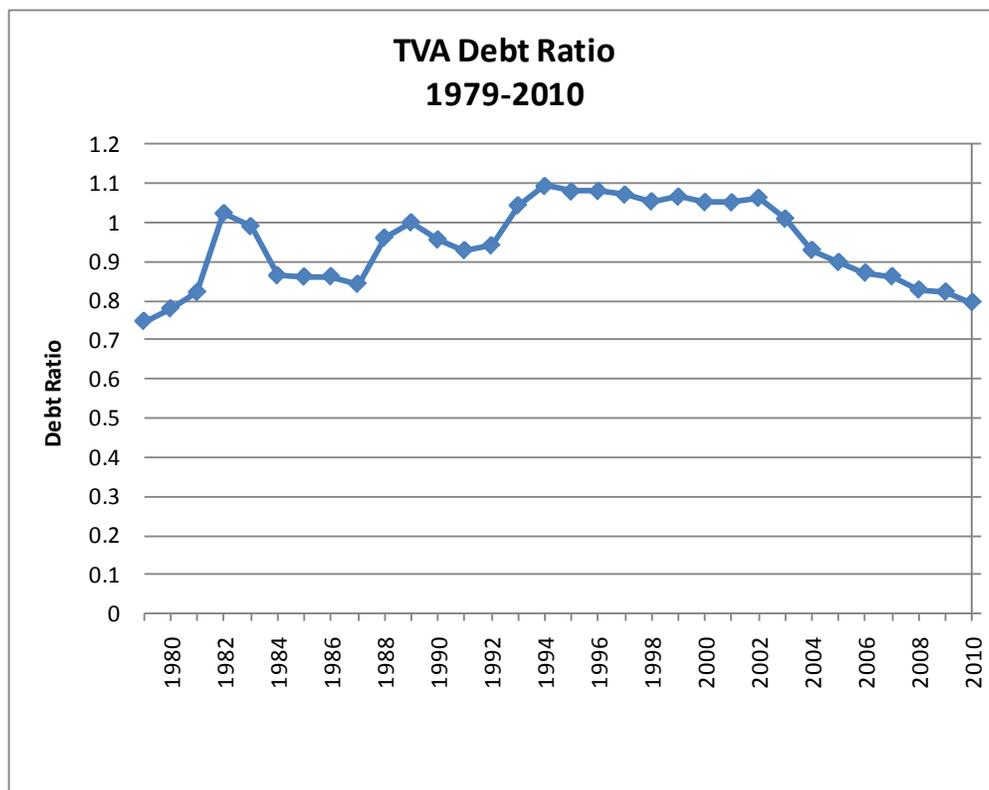
The \$30 billion debt ceiling in 1979 dollars is equivalent to more than \$90 billion in 2010 dollars when the average annual Consumer Price Indices from 1980 through 2010 are applied on a cumulative basis. In other words, the debt ceiling would have to be \$90 billion in 2010 to have the same purchasing power as in 1979. TVA actually has a more restrictive debt ceiling today than it did in 1979 due to the effects of inflation. In 2010 dollars, the purchasing power of 1979's \$30 billion debt ceiling is only \$10 billion.

As noted above, appropriations for TVA's power program ended in 1959 when TVA obtained self-financing status for that program, and appropriations for TVA's stewardship, economic development, and multipurpose activities (nonpower programs) ended in 1999. Since 1999, TVA has funded virtually all of its operations entirely from the sale of electricity and power system financings, which primarily consists of the sale of debt securities.

Debt Ratio

Debt ratio is a measure of the proportion of assets financed by debt. We calculated TVA's debt ratio⁷ for 1979 through 2010. The lowest debt ratio was 0.75 in 1979, and the highest debt ratio was 1.09 in 1994. TVA's debt ratio basically has declined since the 1994 peak—the FY 2010 debt ratio being 0.79, and the average for the past five years being 0.84. Thus, TVA is financing a greater percentage of performing assets with internally generated funds than with debt, in contrast to the 1990s, as shown in Table 3.

Table 3. TVA's Debt Ratio, 1979 - 2010



Energy Prepayments

On October 8, 2002, TVA began its Discounted Energy Units program. This power discount program allows TVA's power distributors to prepay a portion of the price of firm power they plan to purchase from TVA in the future. In return, the distributors receive a discount on a specific quantity of the future power they purchase. The quantity of power varies based on an implied interest rate associated with TVA's estimated cost of borrowing for a given period. As of September 30, 2010,

⁷ We calculated the debt ratio using the following formula: (Short-Term Debt + Treasury Notes + Long Term Debt + Leaseback Obligations + Energy Prepayment Obligations) divided by (Total Assets – Deferred Nuclear Generating Units – Other Regulatory Assets – Debt Issue/Reacquisition Costs – Other Deferred Charges – Unamortized Cost of Canceled Nuclear Generating Assets).

TVA's energy prepayment obligation totaled approximately \$822 million and included 36 distributor participants. According to its September 30, 2010, financial statements, TVA has not offered the Discounted Energy Units program since the end of 2004.

Leaseback Obligations

A lease-leaseback is a financial transaction where one party (original lessor) leases an asset to another party and simultaneously leases it back from that other party for a specified term. Normally, the original lessor receives cash proceeds from the other party upfront and pays the other party lease payments. TVA's lease payments under its leaseback transactions are considered costs of operating, maintaining, and administering its power properties and, as such, those payments have priority over TVA's payments on statutory debt.

Since FY 2000, TVA has received approximately \$1.334 billion through lease-leaseback transactions:

- According to a GAO report,⁸ from 2000 through 2003, TVA received approximately \$945 million in proceeds by entering into leaseback transactions for 24 new peaking combustion turbine units. The report states:

[U]nder these arrangements, TVA agreed to lease the assets to private equity investors for a 50-year period and immediately received the full amount, approximately \$945 million, due under the 50-year leases. The equity investors agreed to lease the assets back to TVA for a period of 20 years. Over the 20-year leaseback period, TVA is required to make semiannual lease payments... At the end of the 20-year leaseback period, TVA has the option of purchasing the equity investor's remaining interest in the assets over the remaining 30-year period of the 50-year lease. If, after 20 years, TVA elects to exercise the purchase option, it would pay the fair market value of the assets, subject to certain maximum amounts set in the lease-leaseback arrangements. Once TVA provides notice that it intends to purchase the equity investor's interest in the assets, negotiations between TVA and the equity investor will commence to determine the fair market value of the assets. If they cannot agree on a fair market value within 90 days of TVA's notice, the fair market value will be determined by an independent appraisal procedure.

Although these arrangements allowed TVA to retain legal title to the assets, TVA also relinquished enough interest in those assets so that the equity investors were entitled to certain tax benefits that were not available to TVA. The GAO report further provided that TVA officials "decided to use this type of financing primarily because it lowered their financing costs."

- In 2003, TVA also received approximately \$389 million in proceeds by entering into a leaseback transaction for qualified technological equipment and software.

Conflicting Views on Lease-Leasebacks and TVA's Statutory Debt

In the past, there have been conflicting views as to whether TVA's lease-leaseback obligations should be treated as "bonds, notes and other evidences of indebtedness" for purposes of TVA's statutory debt ceiling. According to GAO's June 2003 report, *Information on Lease-Leaseback and Other Financing Arrangements*, GAO-03-784, OMB concluded that TVA's lease-leaseback arrangements were "equivalent to the purchase of assets financed by the issuance of agency debt because: (1) TVA retains legal ownership of the assets, (2) the present value of TVA's lease

⁸ Information on Lease-Leaseback and Other Financing Arrangements, GAO-03-784.

payments is very high compared to the fair market value of the assets, and (3) TVA controls use of the assets.” Notwithstanding, the report also stated that “[OMB is] also of the opinion that the TVA Act is unclear regarding whether TVA’s lease-leaseback arrangements should be counted against the \$30 billion bond ceiling established by Section 15d of the TVA Act.”

According to TVA’s OGC and outside counsel, the language and structure of Section 15d. and its legislative history provide a basis for concluding that these leasebacks and TVA’s obligation to pay rent under them should not be considered in determining TVA’s amount of outstanding bonds under Section 15d. (a) for the following reasons:

- While Congress provided two methods⁹ to finance TVA’s power system, the Act only placed a limitation on the amount of “bonds” TVA can have outstanding at any one time.
- References to bonds in Section 15d. make sense when applied to traditional financial instruments such as TVA bonds. However, the same references make no sense, or only tortured sense, when applied to leases.
- In the three instances when the TVA Act refers to both bonds and leases in the same provision, it is clear that Congress was drawing a distinction between the two.
- Testimonies during debt ceiling hearings from various United States Senators have demonstrated awareness that while there is a limitation on the amount of bonds that may be issued, there is no such limitation on lease-purchases. Thus, the OGC would argue that “Congress clearly recognized that leases would not count towards the bond ceiling and took no action to change the language of Section 15d.”

In addition, OGC stated that the lease-leaseback transactions do not create “indebtedness,” as that term is used within Section 15d. of the Act because no creditor-debtor relationship is formed in connection therewith.

Because of these conflicting stances, in June 2003, GAO recommended that “Congress may want to consider amending the TVA Act to clarify whether the debt cap should include alternative sources of financing (such as lease-leaseback arrangements) that have the same impact on TVA’s financial condition and competitive position as traditional debt financing.” In its 2003 report about TVA’s lease-leasebacks, GAO stated:

[B]ased on our analysis of the law and its legislative history, we conclude that the current law does not clearly and unambiguously address whether the amount of the lease-leaseback arrangements should be counted against the debt cap. However, there is support for the view that bonds are treated as separate means of financing the expansion of facilities from leases and lease-purchase agreements. There is also support for the view that, although bonds are covered by the ceiling in Section 15d (a) of the TVA Act, leases and lease-purchase agreements are not. Finally, there is support for the view that lease-leaseback arrangements are sufficiently analogous to lease and lease-purchase agreements to support the conclusion that they are not bonds for the purpose of Section 15d (a) of the TVA Act. Therefore, TVA’s decision that its lease-leaseback arrangements should not be treated as debt for purposes of the debt cap in Section 15d (a) of the TVA Act is not unreasonable, even though these arrangements have the same impact on TVA’s financial condition and future competitiveness as traditional debt.

⁹ Section 15d. (a) authorizes TVA to issue and sell bonds, and Section 15d. (g) permits the use of lease, lease-purchase agreements, and power purchase agreements.

According to TVA:

[D]uring 2004, OMB prepared draft legislation that would expand the type of evidences of indebtedness that count toward TVA's \$30 billion debt ceiling. Under this legislation, long-term obligations that finance capital assets would count toward the debt ceiling, including lease-leaseback arrangements and power prepayment agreements whose original term exceeded one year.

TVA reports all of its liabilities, including statutory debt, leases, and prepayments, according to generally accepted accounting principles, in external financial reports filed with the SEC.

Regarding the historical uncertainty of the proper classification of lease-leasebacks, TVA management stated that the Appendix of the Budget of the United States Government, Fiscal Year 2012 (Budget), excludes alternative financing, such as lease-leasebacks and energy prepayments, from being part of TVA's statutory debt balance. Specifically, the Budget states: "At the beginning of 2011, TVA currently has \$2.2 billion in debt-like obligations that are not counted against its statutory debt cap."

Ramifications of Issuing Debt Above the Debt Ceiling

TVA would face significant legal risks if it issued bonds that caused total debt to rise above the debt ceiling. Such bonds would likely be invalid because TVA does not have the authority to issue bonds beyond the debt ceiling. Compensation for any damages incurred by bondholders, ratepayers, or other stakeholders might be sought from TVA and possibly also from the TVA officials who caused the bonds to be issued. For this reason, according to TVA, it has a variety of safeguards/controls in place to ensure TVA does not exceed the debt ceiling. Exceeding the debt ceiling would not violate a specific bond covenant, but the Basic Tennessee Valley Authority Power Bond Resolution constitutes a contract between TVA and bondholders that may imply an obligation to comply with the law.¹⁰ This implied obligation would be violated if TVA has more than \$30 billion in outstanding bonds.

According to the Bond Resolution, if TVA is given written notice of the default and fails to cure the default after a reasonable opportunity to do so, then a lawsuit may be brought by the holders of at least 5 percent of the aggregate principal amount of the outstanding bonds. Such a lawsuit can seek to (1) enforce TVA bond covenants and agreements, (2) enjoin any acts that would violate the rights of bondholders, and (3) protect and enforce the rights of bondholders. A court could prevent TVA from issuing bonds in excess of the debt ceiling; however, once the amount of outstanding bonds dipped below \$30 billion, TVA could again issue bonds up to the debt ceiling.

The Bond Resolution does not provide for an acceleration of TVA's obligation to repay principal and interest if the debt ceiling is exceeded. Whether debt in excess of the ceiling constitutes a default under TVA's lease and leaseback agreements is less clear. Such a situation would be evaluated according to the circumstances of the default and the terms of particular lease and leaseback agreements.

In its response to our draft report, TVA management provided further information about the internal and external controls in place to ensure that TVA's bond issues are within its debt ceiling limit. Specifically, TVA stated that these controls include obtaining legal opinions from outside counsel and TVA's OGC on the validity of the debt, as well as approval from the U.S. Treasury.

¹⁰ Bond covenants specify the rights of bondholders and the duties of issuers, such as actions that the issuer is obligated to perform or is prohibited from performing.

TVA'S DEBT COMPARISON WITH OTHER UTILITIES

Because TVA is an electricity wholesaler, it is often compared with IOUs. However, these comparisons are not particularly useful in determining if TVA's debt level is too large, too small, or adequate because the two types of organizations have different missions and are capitalized differently.

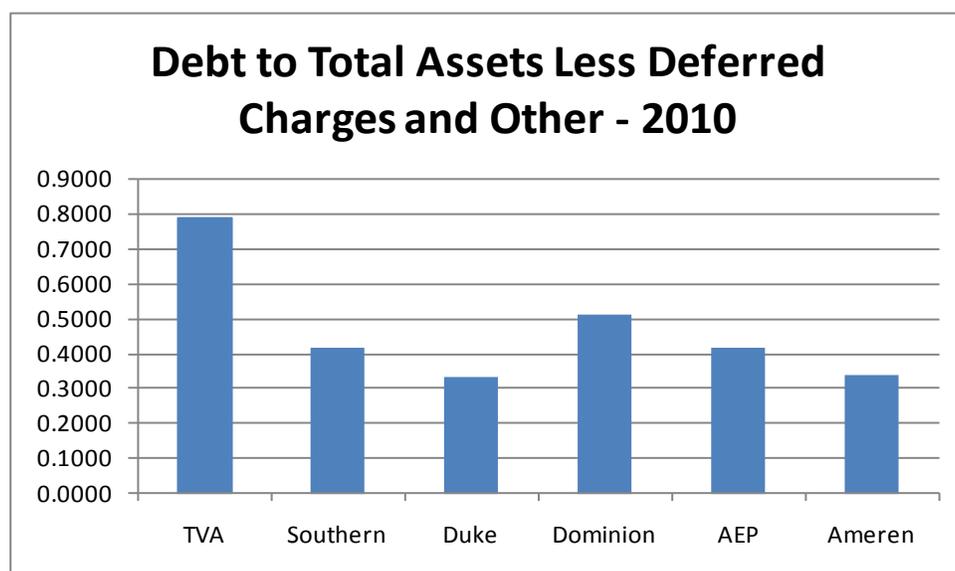
“Although TVA is often compared to IOUs, these comparisons are not very useful because of differing missions and financing mechanisms.”

In fact, TVA's external auditor does not compare TVA ratios with industry average ratios because TVA's operating characteristics are so different. The primary differences affecting debt levels of TVA and IOUs are as follows:

- As stated in the TVA Act, Section 15d. (f), TVA's goal is to sell power “at rates as low as are feasible.” IOUs are operated in a manner to try to maximize shareholder value.
- TVA sources of capital to fund projects are limited to raising rates, issuing debt, and/or internally generated funds (retained earnings). IOUs can issue preferred and common stock in addition to these sources of capital.

Comparing TVA and IOU debt levels is difficult because of their differing financing mechanisms, but the following tables provide some information about the debt level and assets of TVA and five IOUs. For example, Table 4 compares the total debt of the entity with the total assets of the entity less assets classified as deferred charges/other. As expected, TVA's debt level compared with these assets was greater than that of the five IOUs.¹¹

Table 4. Debt to Total Assets Less Deferred Charges and Other



¹¹ We selected five large utilities with service territories that border states that have TVA service. TVA has compared its performance to these same five utilities.

Table 5 compares the amount of generating capacity of the utility with the amount of debt used to build/buy the capacity. TVA had a better ratio of generating capacity to debt level than three of the five utilities.

Table 5. Generating Capacity Divided by TFOs Plus Preferred and Common Stock

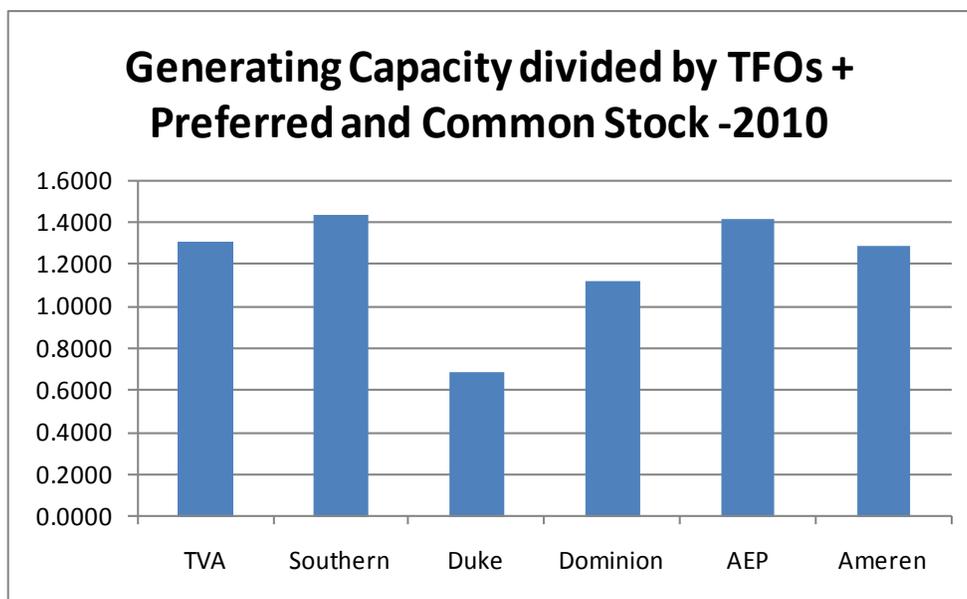


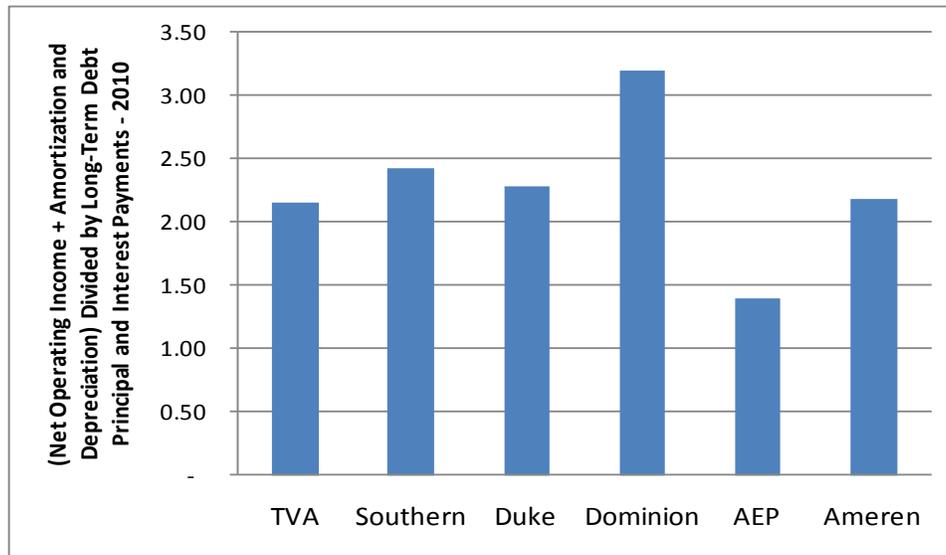
Table 6 compares TVA's DSC ratio to the other five utilities and shows that TVA had the lowest ratio among all six utilities. When appropriate, the DSC ratio provides a general measure of the amount of debt that can be supported by a company's cash flows for a specific period. The higher the ratio, the more likely a company will be able to service its debt obligations in a timely manner.

However, according to TVA, because most large utilities, including TVA, have bullet maturity debt,¹² the DSC ratio does not, at least for large utilities, provide a meaningful measure of a company's ability to service its debt, at least when analyzing the ratio on a year-to-year basis. Because the amount of debt repayment is a major component used to calculate this ratio, the ratio can be relatively large in one year and significantly smaller in another year, depending on the maturity dates of its debt obligations.

In FY 2010, for example, TVA calculated its DSC ratio at 2.15, more than double the ratio of 1.07 calculated in FY 2009. This change resulted primarily from long-term debt maturities of \$8 million in FY 2010 and more than \$2 billion in FY 2009, even though the total amount of outstanding debt remained stable. Therefore, TVA personnel told OIG that rating agencies generally do not calculate DSC ratios for large investor-owned utilities, but instead use the interest coverage ratio (see Table 7) or other related metrics. However, according to TVA, when rating agencies evaluate utilities that, like TVA, have a not-for-profit financial structure such as cooperative generation and transmission organizations, they typically use a DSC ratio.

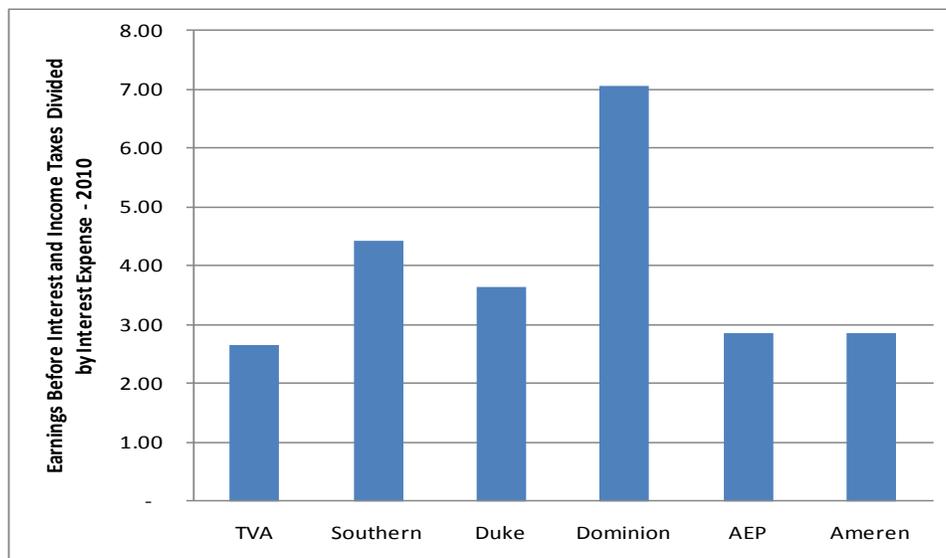
¹² Debt with a single payment for an entire loan amount that is paid at maturity.

Table 6. Debt Service Coverage Ratio



The times interest earned ratio (also known as the interest coverage ratio) gauges a company's ability to pay interest on its debt. We calculated this ratio among all six utilities and found that TVA's ratio¹³ is lower than the other five utilities. According to one source, the lower the ratio, the more likely the company is burdened with debt expense. Furthermore, when a company's times interest earned ratio is 1.5 or lower, its ability to meet interest expenses may be questionable; a ratio below 1 indicates that the company is not generating enough revenue to satisfy interest expenses. TVA's times interest earned ratio of 2.65 for FY 2010 was the lowest among all six utilities. However, as noted above, TVA's ratio is lower than other utilities because of its unique capital structure and different operating model.

Table 7. Times Interest Earned Ratio

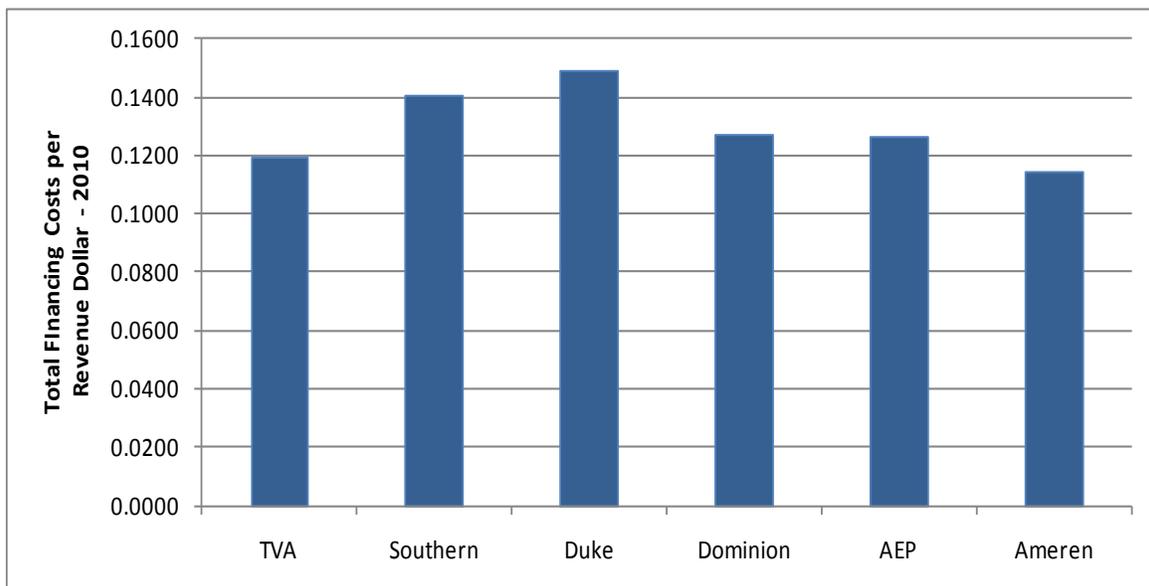


¹³ To calculate this ratio, we used TVA's Operating Income plus Other Income in place of Earnings Before Interest and Income Taxes, since TVA does not pay state or federal income taxes. However, in its own calculation, TVA used Cash From Operating Activities (on the Statement of Cash Flows) in place of Earnings Before Interest and Income Taxes. However, the difference resulting from each method was not material.

The total financing cost per revenue dollar (TFC) ratio illustrates how much of each dollar in revenue is used to pay financing costs. The TFC is calculated by summing the interest expense and dividends paid and dividing the sum by annual revenue. The smaller the ratio, the less amount of each revenue dollar consumed by financing costs. As shown in Table 8, TVA had the second lowest TFC for 2010 compared to the other five utilities. TVA's TFC ratio was 0.1190, meaning about 12 cents of every dollar generated in revenue was used for financing costs. The remaining TFC ratios ranged from a low of 0.1143 to a high of 0.1488.

TVA having a lower TFC is expected because TVA is a government corporation and does not pay dividends like other utilities. TVA's lower TFC can be explained to some extent by (1) TVA's financing structure not including the common or preferred stock that has a higher cost of capital and (2) TVA's AAA credit rating resulting in lower interest costs for TVA. The other utilities' shareholders require a return for the investment risk they assume which is an additional financial cost for the other utilities that is not part of TVA's financial structure. However, unlike interest costs, dividends may be eliminated at the company's discretion based upon the economic circumstances of the company.

Table 8. Total Financing Costs per Revenue Dollar



CHALLENGES FACING TVA

TVA faces many challenges, many of which have been publicly discussed due, in part, to the commitment of both the TVA Board and the TVA Chief Executive Officer (CEO) since the Kingston ash spill to be more transparent about major issues facing the company. Going forward, these challenges will affect both its debt levels and its ability to maintain its debt below the current \$30 billion statutory debt ceiling. As of June 30, 2010, TVA's statutory debt balance was \$23.4 billion and its alternative financing balance was \$2.2 billion. TVA forecasts a statutory debt balance of \$24.3 billion and an alternative financing balance of \$2 billion by September 30, 2011. In anticipation of this debt increase and the future challenges, TVA has determined that it will have to address the debt ceiling issue. The list of challenges we cite here facing TVA is not all-inclusive but emphasizes some significant issues that will impact its ability to stay within the current debt ceiling.

- **TVA's New Strategic Direction** – On August 26, 2010, TVA announced its plan to idle nine older coal units, add new nuclear generation, and improve energy efficiency. These efforts are part of TVA's new vision statement to make TVA the nation's leader in improved air quality and increased nuclear production and the southeastern leader in increased energy efficiency.
- **Aging Fossil Generation Fleet** – TVA faces challenges in providing a reliable and economic power supply owing to the age of its coal-fired generation fleet. On average, TVA's coal-fired generation fleet is among the oldest of any utility in the southeastern United States. As of September 30, 2009, the weighted average age of TVA's coal-fired generation assets was 47 years. During recent years, TVA has on average invested less in maintaining its generation assets than surrounding utilities. Although TVA increased its maintenance expenditures on generating assets in 2011, it may not be economical to improve the reliability of some units in light of their age and current condition.
- **Environmental Regulations** – TVA expects increased environmental regulation in the future, including the regulation of mercury and the emission of greenhouse gases (GHG) such as carbon dioxide. TVA has considered and intends to continue considering fuel mix in making decisions about additional generation. The restart of Browns Ferry Unit 1, construction to complete Watts Bar Unit 2, the filing of a Combined Construction and Operating License Application for two new units at the Bellefonte Nuclear Plant, and the reactivation of the construction permits for existing Bellefonte units are examples of TVA's activities to pursue or consider generation sources that do not emit GHGs. The nature or level of future regulation of GHGs is unclear at this time. Accordingly, the costs associated with such regulation are currently unknown but could be substantial. TVA would have to recover such costs in rates or pursue some other action, which might include removing some coal-fired units from service.
- **Litigation** – In addition, TVA has received several notices of intent to sue under various environmental statutes from both individuals and environmental groups. However, according to TVA's 8K, dated April 14, 2011, one series of lawsuits was recently resolved. Specifically, on April 14, 2011, TVA entered into two agreements¹⁴ that generally will absolve TVA from any liability under new source review and associated requirements under the Clean Air Act for maintenance, repair, and component replacement projects at TVA's coal-fired plants. Relevant portions of the agreements, which are substantially similar, provide:

¹⁴ One of the agreements is a Federal Facilities Compliance Agreement with the United States Environmental Protection Agency, and the other agreement is a proposed consent decree with the states of Alabama, North Carolina, and Tennessee, the Commonwealth of Kentucky, and three environmental advocacy groups.

- o TVA, with the Environmental Protection Agency's approval, will invest \$290 million in energy efficient projects, demand response projects, renewable energy projects, and other TVA projects.
 - o TVA will provide Alabama, Kentucky, North Carolina, and Tennessee \$60 million to fund environmental projects, giving a preference for projects in the TVA watershed.
 - o TVA will pay a \$10 million civil penalty that will be divided among the Environmental Protection Agency, Alabama, Kentucky, and Tennessee.
 - o TVA committing to retiring (on a phased schedule) two units at the John Sevier Fossil Plant, the six small units at the Widows Creek Fossil Plant, and ten units at the Johnsonville Fossil Plant.
- **Pension Funding Shortfall** – TVA's retirement benefit levels, not funding TVARS (Tennessee Valley Authority Retirement System) for six years, a mature retirement system, and the market crash of 2008 and early 2009 have resulted in a "perfect storm" in which TVARS has become significantly underfunded. As part of a broader market decline, the pension plan experienced dramatic declines in asset values over the past two years because of much lower-than-expected asset returns, which have affected the funded status. In 2008, asset values declined \$1.8 billion. Although financial markets improved in 2009, the plan remains below 100 percent funded, partly because of the approximately \$600 million in benefits that are being paid out each year. To help improve the funded status of the plan, TVA made a discretionary pension contribution of \$1 billion in September 2009. If investment asset returns are at or above expectations, no further contributions will be made from 2010 through 2013. However, if actual returns continue to be flat or lower than expected or benefit payments rise significantly, additional contributions to the plan over the next few years may be necessary.

In response to our draft report, TVA management stated that the TVA Board of Directors recently approved a discretionary contribution of \$270 million for FY 2011 and delegated authority to the CEO to approve a discretionary contribution for FY 2012. TVA management also stated that the contribution of \$1 billion made in 2009 fulfilled its obligations for fiscal years 2010 through 2013. However, as noted above, depending on market forces and benefit payments, additional funding may be necessary to maintain and achieve a healthy and solvent pension fund.

- **Renewable Portfolio** – Pending federal legislation involves renewable energy and energy efficiency. Depending on the details of the statute that is enacted, over the calendar year (CY) 2011 to CY 2039 time frame, TVA might have to ensure that anywhere from 3 percent to 20 percent of the electricity it sells is produced by renewable sources (as defined by Congress), or make alternative compliance payments for any deficiencies. In addition, H.R. 2454, American Clean Energy and Security Act of 2009, which was passed by the U.S. House of Representatives, would cut U.S. GHG emissions 17 percent by CY 2020 from CY 2005 levels and 83 percent by CY 2050. Utilities are a source of GHG emissions and would likely be impacted by such legislation. Under most proposed legislation, renewable power generation resources include solar, wind, incremental hydroelectric, biomass, and landfill gas. Generating power with renewable sources instead of coal-fired plants could help reduce the carbon dioxide intensity of TVA's power generation. But power generated using renewable sources, with current technologies, may not be economically competitive compared with existing power generation assets. Technology advancements will need to address some of the operational issues

associated with renewable energy, such as energy storage for intermittency and interconnection technologies for on-site, nongrid-connected renewables and efficiencies.

Most renewable energy resources are geographically specific. Some regions of the United States have an abundance of wind and solar resources, whereas other regions have hydroelectric resources. Regional differences and limitations play a primary role in the types and amount of renewable and clean energy developed across the country. Within the area served by TVA, two of the most abundant renewable resources are hydroelectric and biomass. Feasible wind energy in this region is primarily associated with mountain top and ridgeline installations, and the total potential capacity is limited when compared with other parts of the nation where wind energy is more abundant. If TVA is required to increase its use of renewable resources and the cost of doing so is greater than the costs of other sources of generation, TVA's costs may increase significantly.

- **Kingston Ash Spill Cleanup** – TVA has recorded in its financial statements an estimate of \$1.1 billion to clean up this event. The \$1.1 billion estimate currently includes costs related to ash dredging and processing, ash disposition, infrastructure repair, dredge cell repair, root cause analysis, certain legal and settlement costs, environmental impact studies and remediation, human health assessments, community outreach and support, regulatory oversight, cenosphere recovery, skimmer wall installation, construction of temporary ash storage areas, dike reinforcement, project management, and certain other remediation costs associated with the cleanup. If the actual amount of ash removed is more or less than the estimate, the expense could change significantly, as this affects the largest cost components of the estimate.
- **Bond Rating** – According to TVA's 2010 Annual Report, "although TVA's bonds are not obligations of the United States, and the United States does not guarantee the payments of principal or interest on bonds, TVA's credit ratings could be downgraded if the sovereign credit ratings of the United States are downgraded." Standard & Poor's downgraded the United States and TVA's credit rating from AAA to AA+. The downgrade of TVA's rating to AA+ by Standard & Poor's may increase TVA's interest expense by increasing the interest rates that TVA pays on debt securities that it issues.

FINANCING STRATEGY ALTERNATIVES

As presented in this report, TVA has a long history of providing low-cost electricity to the Tennessee Valley, but it faces increasing challenges that will have a financial impact on its future. Although increasing the debt ceiling has historically been TVA's approach to meeting its financing needs, it is by no means the only financing strategy. The various strategies discussed below were developed based on (1) our review of internal TVA documents regarding various financing arrangements, (2) interviews with TVA executives and other legal and financial personnel, and (3) discussions with the head of the Tennessee Valley Public Power Association, Inc., OMB personnel, and consulting staff from PricewaterhouseCoopers.

Some of the following alternatives would require a statutory change to the TVA Act. Currently, the TVA Act provides: "[t]he Corporation is authorized to issue and sell bonds, notes and other evidences of indebtedness (hereinafter collectively referred to as 'bonds') in an amount not exceeding \$30,000,000,000 outstanding at any one time to assist in financing its power program and to refund such bonds." Any change to the Act, including a modification to increase TVA's current indebtedness ceiling of \$30 billion, would need to go through the legislative process.

In presenting these strategies, OIG takes no position on which strategy or combination of strategies might be more feasible. That is a pure policy decision reserved for the TVA Board. The pros and cons listed below necessarily contain some element of subjective opinion. We present these strategies and their relative merits strictly as a cumulative summary of the varied views we canvassed from the sources mentioned above.

Leave Debt Ceiling Unchanged and Increase Customer Rates

TVA currently has two major sources of funding for operations and capital needs: debt or customer rates. As TVA nears the debt ceiling, it faces an increased risk of having its debt rating downgraded. Without an increase in the debt ceiling, TVA will more than likely have to use rate increases to fund operations and capital needs; otherwise, needed maintenance or capital projects may have to be postponed, which could have a negative impact on the reliability of TVA's power system. Currently, TVA has one of the older generating fleets in the southeast United States. With limited resources and an older generating fleet to maintain and operate,¹⁵ TVA faces an increased risk of not meeting governmental regulations and mandates. If TVA does not obtain relief from its borrowing authority limit, it may have to increase rates more than planned, which could have a detrimental impact to the economic growth of the region.

Raising customer rates could provide TVA with the flexibility to reduce debt and/or fund capital projects, depending on the size of the rate increase. Because the TVA Board of Directors controls the rate setting process, the decision to increase customer rates can be made internally. Also, increasing customer rates could improve TVA's ability to maintain or improve system reliability, meet increased demand, and conform to environmental regulations. However, TVA has marketed itself as a low-cost provider of electricity, and any customer rate increases may impact its ability to make that claim. Past customer rate increases have prompted complaints, and future customer rate increases may bring more complaints depending on the magnitude of the increases. Residential and industrial complaints may also increase political pressure at local, state, and federal levels. Increased customer rates may also negatively impact economic development in the TVA service territory. Although the TVA Board of Directors control the rate setting process, they have sworn to uphold the requirements of the TVA Act, which includes keeping rates as low as feasible.

On the other hand, funding capital projects by raising customer rates is only a short-term solution and is not sustainable long term. Funding these projects with current rates is inconsistent with the financial principles established by the TVA Board which call for debt to not exceed the useful life of existing assets, and new debt to be only used for new assets. Most companies and governments do not fund large multiyear capital projects that will serve customers for decades through annual revenue. Instead, most projects of this nature are funded through debt or a combination of debt and equity because these projects benefit future periods, and issuers do not want to fully burden current customers with the cost of the project. The cost of the project is funded over time by all customers that benefit from the project through the debt service payments of the project's bond issue.

Importantly, this option of raising rates to fund projects would not require a change to the TVA Act and could alleviate some apprehension about opening the Act. Specifically, some within TVA are concerned that opening the Act could lead to changes that could be detrimental to TVA. For example, according to OGC, when the TVA Act was opened to establish TVA's self-financing structure, it was also amended to include the service territory ("fence") even though the fence was not originally part of the proposed amendment. Removal of the Anti Cherry-picking provision from the TVA Act has been

¹⁵ While the April 2011 agreements with the Environmental Protection Agency and other parties discussed above will require TVA to retire 18 units at three of TVA's fossil plants, TVA must still operate and maintain its remaining fossil units, some of which are more than 40 years old.

attempted in the past but has ultimately failed, which increases concerns that opening the TVA Act to increase the debt ceiling limit may also lead to unwanted changes. In addition, public perception of TVA seeking an increased debt limit may be quite negative judging from the current public opposition to increasing the federal government's debt ceiling.

Define the Debt Ceiling in Terms of a Financial Metric Rather Than a Set Dollar Amount

Under this option, the maximum bond borrowing authority would be set through a financial metric. TVA is currently considering whether its request for debt ceiling relief to Congress should include replacing the ceiling with the DSC ratio. As noted above, when appropriate, the DSC ratio provides a general measure of the amount of debt that can be supported by a company's cash flow for a specific period. In general, the higher the ratio, the more likely a company will be able to service its debt obligations in a timely manner. However, analyzing this ratio on a strictly annual basis can be misleading because the ratio can be relatively large in one year and significantly smaller in another year, depending on the maturity dates of an entity's debt obligations. To compensate for significant fluctuations from year to year, TVA is considering the option of using a DSC ratio that is averaged over a specific period of time.

This option would allow TVA to manage its finances based on its ability to repay its debt rather than have its borrowing authority be constrained by a set dollar amount. A financial metric, rather than a debt ceiling stated in terms of an arbitrary dollar amount, would provide control of TVA's borrowing authority that is tied to TVA's ability to pay outstanding debt, similar to IOUs, while still providing Congress with oversight and control. However, because the current debt ceiling established in the TVA Act is stated as a dollar amount, this option would require a change to that Act.

“Debt is TVA’s lowest-cost form of financing long-lived assets.”

Increase Debt Ceiling Incrementally Based on Planned Capital Needs

This option would allow TVA to fund major capital projects without increasing customer rates and would also provide Congress with a plan for how TVA would use the proceeds of the debt. As Table 9 shows, Congress approved TVA's self-financing status in 1959 and, on average, increased TVA's debt ceiling once every five years, up until the last increase in 1979. These incremental increases, made through changes to the TVA Act, provided a platform for Congress to have more oversight of TVA because the increases were based on needs identified in TVA's financial plans. At the same time, TVA would benefit from obtaining needed funding through an increase to the debt ceiling, which is the lowest cost option for TVA and its customers to finance capital needs. Incremental increases could improve TVA's ability to maintain or improve system reliability, meet increased demand, and conform to environmental regulations and also could provide an opportunity for TVA to demonstrate its accomplishments, including keeping rates as low as feasible. Nonetheless, increasing the debt ceiling above the current \$30 billion limit would lead to a greater amount of debt for TVA, which could be perceived negatively in the current weak economy and the foster uncertainty about how higher debt levels can be sustained.

“Although TVA receives no federal appropriations, additional borrowing by TVA is included in the overall federal budget deficit.”

According to the OGC, because of federal budgetary principles, TVA's expenditure of increased borrowings is presented in the budget as being equivalent to TVA's receipt and expenditure of congressional appropriations and would cause an equal increase in the overall federal budget deficit that currently exists. Thus, Congress' current mission to reduce the federal deficit, coupled with resistance from those who generally oppose a debt ceiling increase, could be a constraint to TVA's success in getting the debt ceiling increased.

Defer Capital and Operations and Maintenance Projects

This is not a realistic option from TVA's perspective because, as stated previously, TVA faces challenges in providing a reliable and economical power supply owing to the age of its generation fleet. On average, TVA's coal-fired generation fleet is among the oldest of any utility in the southeastern United States. Therefore, TVA is probably limited in the amount of capital and operations and maintenance projects that can be deferred. Even if substantial projects could be deferred, this option would only be a short-term stopgap measure before some other source of funding was obtained for the necessary capital and operations and maintenance projects to take place.

This option increases the risk of reliability problems.

Encourage Distributor-Owned Generation (Generation Owned Partially or Fully by TVA Distributor(s))

TVA and some distributors are pursuing this option and, according to TVA's FY 2010 Annual Report, currently have an interim joint-ownership arrangement in place. This option shares the risk of ownership with the distributors and satisfies a segment of distributors that want an equity ownership in TVA. This option could also improve TVA's ability to maintain or improve system reliability, meet increased demand, and conform to environmental regulations. Because the distributor-owned generation option would likely not involve the issuance of bonds, there would be no need to increase the current TVA debt ceiling. Therefore, TVA could add generation to its system without having it count toward the \$30 billion debt ceiling.

However, with this option, TVA may not be able to structure the transaction in a manner that would not produce a liability that is legally considered to be statutory debt. TVA and the distributors may not be able to negotiate a fair and equitable arrangement for all parties. For example, if TVA and the distributors share ownership of an asset, there may be potential difficulties in determining how liabilities are shared if problems arise during construction or operations that require additional capital outlays.

Increase Use of Alternative Financings (Lease-Leaseback, Capital Leases, and Energy Prepayments)

TVA already uses the methods listed under this option as alternative financing to debt, and based on information we obtained for this review, this option does not technically count toward TVA's debt ceiling. Therefore, it would eliminate any negative publicity that another option, such as raising the debt ceiling, would have. This option would also improve TVA's ability to maintain or improve system reliability, meet increased demand, and conform to environmental regulations.

There is also the risk that the arrangement may result in costing more than debt financing (dependent on the asset value at the end of the arrangement). Because TVA views issuing debt as its lowest cost of meeting capital needs, this would also result in additional costs for TVA ratepayers.

Establish Purchased Power Agreements (Power Purchased From Other Entities Based on Contractual Agreements)

TVA currently uses purchased power agreements to supplement its generating capacity. Depending on the terms of the purchased power agreement, this option may or may not produce a liability that is legally considered statutory debt. Nevertheless, one of the main disadvantages of this option is that TVA loses some control of the power supply. TVA would be relying on another company to provide a portion of the power supply, which increases the risk of system reliability issues and the cost to the TVA ratepayers. There is additional risk that the purchased power agreement counterparty company could declare bankruptcy or renege on its obligation under the agreement (i.e., providing the agreed-upon amount of electricity). In fact, in 1999, the counterparty on one of TVA's purchased power agreements reneged on the agreement during a high demand period, forcing TVA to purchase power in the spot market at prices that were much higher than the agreed price. According to TVA, the default led TVA to rely less on purchased power agreements and more on its own generation, which required unanticipated spending.

Entering into an Agreement With Another Party for the Purpose of Financing New Generation (Partnering)

This option is related to TVA entering into an agreement with another party, specifically to allow the other party to finance new generating capacity for TVA's use only, in order to meet future load. Under a Special Purpose Entity (SPE)¹⁶ arrangement, TVA would contribute the existing assets to the SPE, while the other parties would finance the completion of the asset. Once completed, TVA would operate, maintain, and take the power from the generating units. This option would not produce a liability that is legally considered to be statutory debt.

An SPE agreement could have several major issues/problems. One primary obstacle is the ability to find a partner or partners that will fund the project through completion. Specifically, there is the risk that the project may not be completed and/or produce revenue, either because the financing was cut off before completion or because the project was poorly constructed. Another risk to the partners relates to how TVA will compensate their investment in the project.

An agreement could include a payment structure based on "take and pay," meaning that TVA would pay only for the electricity that was generated by the assets. Under this arrangement, the partner may not be able to recoup its investment, depending on whether enough electricity is generated by the assets.

In addition, TVA is a government corporation and therefore has to comply with the Government Corporation Control Act. For this option to be in compliance with the Act, the agreement would have to be structured in such a way that TVA would not have controlling interest in the SPE but would still be the primary recipient of the generation. TVA may be required to provide separate financial statements for the generating plant operations to the partner at an added cost. Owing to the additional risks discussed above and the return that a partner would require for accepting this risk, this option may cost TVA ratepayers significantly more than if the project were funded solely through TVA debt.

¹⁶ An SPE is a legal entity (usually a limited company of some type or, sometimes, a limited partnership) created to fulfill narrow, specific, or temporary objectives. SPEs are typically used by companies to isolate the firm from financial risk. A company will transfer assets to the SPE for management or use the SPE to finance a large project, thereby achieving a narrow set of goals without putting the entire firm at risk. SPEs are also commonly used in complex financings to separate different layers of equity infusion.

Demand Reduction Program

According to TVA's Environmental Impact Statement related to its Integrated Resource Plan issued in March 2011, "TVA currently has a portfolio of demand-side management programs focusing on energy efficiency and demand response (EEDR). Energy efficiency programs are designed to reduce the use of energy while providing the same level of energy service. Demand response programs are designed to temporarily reduce a customer's use of electricity, typically during peak periods when demand is highest." In addition, the Environmental Impact Statement also provides that "TVA's EEDR programs are targeted at residential, commercial and industrial customers, and include a variety of energy-saving tools and incentives that help save energy and reduce power costs while providing peak reduction benefits for the power system." TVA's Integrated Resource Plan issued in March 2011 states that the goal of these programs is to reduce future load requirements by 3.5 percent and would "result in an energy savings of about 6,000 GWh by the end of 2015." The Integrated Resource Plan predicts that "meeting this goal would: (1) save residential and commercial power customers more than \$350 million in FY 2015, (2) provide 1,900 MW of extra power capacity on the TVA system, and (3) prevent TVA from having to build at least two new power plants."

The demand reduction programs may reduce the need for some capital outlays and have the added benefit of being environmentally friendly by reducing the amount of generation needed to meet load. According to TVA, reducing demand will cost more than meeting demand with additional capital outlays funded with bonds and will reduce TVA revenue. However, if unsuccessful, the programs may not be able to substantially reduce peak demand in order to eliminate capital projects.

Institute Congressional Appropriations for Clean Energy Projects

This would not produce a liability that is legally considered to be statutory debt. This would provide a new and different avenue for raising finances that TVA does not currently have and would not have a direct impact on TVA customer rates. Under this option, TVA could benefit from obtaining the needed funding and demonstrating it has specific plans that agree with congressional clean energy initiatives, and Congress can benefit from having better information about TVA and a closer relationship in monitoring TVA's activities.

According to TVA, this option would be challenging to accomplish since TVA has not received any appropriations since 1999 and for power projects since 1959. It would require legislative action and possibly require amendments to the TVA Act. This option may also involve more parties external to TVA in TVA's generation mix decision-making process. Implementing this option may require significant time before action is taken, which may impact TVA and the debt ceiling limit.

Issue Equity Securities

This option would not produce a liability that is legally considered to be statutory debt. This would be a new and different avenue for raising finances and would not have a direct impact on TVA customer rates.

However, issuing equity securities would require a change to the TVA Act and could be viewed by TVA and TVA distributors of power as leading to privatization of TVA. Some distributors would like an equity stake in TVA and may not be in favor of this option because others outside the TVA service area could become equity owners before the distributors. This option is considered a higher cost of capital than debt, which would result in a higher cost to TVA's ratepayers. Also, depending on the demand for TVA equity securities, this option may not create the capital that TVA needs.

Allow Another Entity to Serve Load Growth That TVA Cannot Serve Without Adding Capacity

This option would not produce a liability that is legally considered to be statutory debt. Although it

could eliminate the need for TVA to add capacity for future demand, it does not eliminate the need to add capacity in order to replace older plants and meet new environmental regulations. The TVA Act and Anti-Cherry-picking provision of the Federal Power Act do not preclude TVA from agreeing to allow another entity to sell power inside the current TVA service territory. Most Valley states have exclusive retail service territories assigned to specific “monopoly” suppliers, which prevent other suppliers from serving retail load in a given retail service territory. These state laws do not apply to wholesale sales.

However, according to TVA, since TVA power contracts with distributors are all-requirements contracts, those contracts would have to be amended to become partial requirements¹⁷ contracts to enable a distributor to purchase all or part of its load growth from other suppliers. This option may increase the risk of customer service decline and raises several questions about rate setting within the TVA service area, determining load growth and selecting the utility to serve the additional load, and determining whether this is a short-term arrangement.

Encourage Factoring of Accounts Receivable and/or Inventory

Factoring is a financial transaction whereby a business sells its accounts receivable or inventory to a third party (or factor) at a discount in exchange for immediate money with which to finance continued business. Factoring is a common financing type of arrangement and would provide TVA with limited financing. This option would not require changes to the TVA Act. However, according to TVA personnel, this option would have minimal impact on TVA’s current debt situation based on the minimal amount of funds TVA could raise from it. In addition, factoring would require TVA to incur the additional cost associated with discounting the factored accounts receivable or inventory.

Explore a Combination of the Above Scenarios

The scenarios listed above can be used in combination to help TVA meet its capital and operations and maintenance needs. The positives and negatives outlined above for each option would still apply and would need to be weighed carefully by TVA to determine the appropriate mix of options. In addition, some of the options discussed above are contingent upon approval and acceptance by parties independent of TVA. While TVA may be able to influence the decisions of these parties, many of the critical decisions to be made are outside of TVA’s control. For example, an increase in the debt ceiling (either in the form of a stated dollar amount or a financial metric) would require a change to the TVA Act, which would require congressional approval and implementation of that request. Similarly, if TVA is unable to obtain partners to finance new generation, it will likely not be able to pursue the “partnering” option discussed above. Based on these uncertainties and the relative positives and negatives of each option, individually, and when considered with other options, we believe that TVA should consider evaluating a mix of options that best suits its current and projected long-term financial position.

¹⁷ A written agreement whereby a buyer assents to purchase for a sufficient consideration all the goods of a designated type that he or she might require for use in his or her own established business. In this case, TVA distributors are required to purchase all of their power requirements from TVA.

CONCLUSION

As previously noted, TVA's challenges are great with the need for financial flexibility to ensure the TVA mission of delivering low cost power is achieved. The current debt ceiling could limit TVA's financial flexibility and require TVA to seek higher cost financing options or require significant rate increases that could adversely affect the economic development of the Tennessee Valley region. Although TVA is in the process of evaluating options, TVA's position is that a financial metric (e.g., something similar to the DSC ratio), rather than a debt ceiling stated in terms of an arbitrary dollar amount, would provide control of TVA's borrowing authority that is tied to TVA's ability to pay outstanding debt, similar to IOUs, while still providing Congress with oversight and control.

The Inspector General agrees with TVA management in their efforts to maintain maximum financial flexibility including (1) the adoption of sound financial principles, (2) ensuring multiple options and strategies are pursued to achieve the most economical approach, and (3) seeking to ensure that debt remains a viable option in future financing decisions.

TVA should be able to support additional debt to help meet energy demands as long as TVA uses the debt proceeds to successfully build generating capacity, the TVA Board maintains its ratemaking authority, and TVA maintains its service territory and customer base.

OBJECTIVES, SCOPE, AND METHODOLOGY

As part of our FY 2010 audit plan, we assessed TVA's financial flexibility given its current debt and other borrowing levels and alternatives for TVA to meet its future financing needs. To achieve our objectives, we performed the following actions:

- Reviewed the TVA Act to obtain an understanding of TVA's borrowing authority and restrictions on other financing arrangements.
- Reviewed recent GAO and OIG reports to obtain background information related to TVA's debt.
- Interviewed personnel from Financial Services (including the Treasury, Financial Planning and Risk, and Controller organizations) and the OGC to obtain information related to TVA's debt and other financing arrangements.
- Reviewed documentation from Financial Services related to TVA's (1) long-range financial planning process, (2) planned construction expenditures through 2014, (3) debt ceiling adjusted for inflation, and (4) alternative financing sources.
- Interviewed the president and chief executive officer of the Tennessee Valley Public Power Association, Inc., and representatives from OMB to obtain information about TVA's debt ceiling and financing alternatives.
- Reviewed TVA's balance sheet data for 1979 through 2010 to calculate debt ratios.
- Reviewed balance sheet data for five utility companies—Southern Company, Duke Power, Dominion Resources, American Electric Power, and Ameren. The information from the company balance sheets was used to calculate debt ratios for comparison with TVA debt ratios.
- Reviewed congressional hearing testimonies related to the establishment of the TVA debt ceiling in 1959 and the subsequent increases in the debt ceiling in 1966, 1970, 1975, and 1979.
- Interviewed a representative of the Bonneville Power Administration to determine if it had any financing options that TVA may want to consider other than issuing debt.
- Interviewed a representative of TVA's Government Relations concerning congressional oversight of TVA.
- Attempted to obtain opinions from TVA critics concerning the possibility of TVA requesting an increase in its debt ceiling. We contacted representatives from the Southern Alliance for Clean Energy, Peter G. Peterson Foundation, Recycled Energy Development, National Resource Defense Council, and the Cato Institute. Each of the representatives had in the past written articles critical of TVA. The people we attempted to contact either turned down our request to comment or never responded to our request.
- Calculated TVA's debt ratio for FYs 1979 through 2010 to determine the trend in TVA's debt ratio.

TVA's History

TVA's Early Years and Events Leading to Establishment of Self-Financing Status

TVA's history is well known by most of its stakeholders, and that history provides necessary context for the debt ceiling issue. TVA's birthplace is located in Muscle Shoals, Alabama, where the Tennessee River drops 140 feet over 30 miles. This drop in elevation created the rapids or "shoals," for which the area is named, and made it all but impossible for ships to travel up the Tennessee River. In 1916, the federal government acquired the site to construct a dam that would generate electricity needed to produce explosives for the World War I effort. In the years following the end of World War I, Congress debated about how the property should be used. Some members of Congress wanted to sell the dam to private interests, and at one time Henry Ford offered to purchase the site and develop a nitrate plant in the area.



Senator George W. Norris of Nebraska led the fight to retain public control over the property. In fact, Senator Norris tried six times to introduce bills for the federal development of the area, but all were defeated by the resistance of Republican administrations.¹⁸ The election of Franklin D. Roosevelt,¹⁹ who backed Norris' plan to develop the Tennessee River Valley,²⁰ changed

¹⁸ Source: <http://newdeal.feri.org/tva/tva01.htm>

¹⁹ Source: <http://www.u-s-history.com/pages/h1653.html>

²⁰ Source: <http://newdeal.feri.org/tva/tva01.htm>

the balance of power, and on May 18, 1933, President Roosevelt signed the Tennessee Valley Authority Act into law.²¹ The TVA Act established TVA as a federal corporation charged with improving the navigation and flood control of the Tennessee River, encouraging reforestation and proper land use in the area, providing regional agricultural and industrial development, and operating national defense-related properties at and near Muscle Shoals, Alabama.

TVA faced several challenges during its early years. Even though Americans had shown some support for public ownership of utilities, during the 1920s and the Great Depression years, the concept of government-owned generation facilities selling to publicly owned distribution utilities was controversial. Many believed that privately owned power companies were charging too much for power, did not employ fair operating practices, and were subject to abuse by their owners at the expense of consumers.²² The strongest opposition to TVA came from power companies that resented the cheaper energy available through TVA and saw it as a threat to private development. They charged that the federal government's involvement in the power business was unconstitutional.²³ However, in *Ashwander v. TVA*, 297 U.S. 288 (1936), the U.S. Supreme Court held that TVA was constitutional, noting that regulating commerce among the states included regulation of streams and that flood control is required to keep streams navigable.

TVA had argued that electricity generation was a "by-product" of navigation and flood control and therefore could be considered constitutional.²⁴

1930s - TVA Starts to Make a Positive Impact

During the Depression, much of the Tennessee Valley land was farmed too hard for too long,

²¹ Source: <http://www.u-s-history.com/pages/h1653.html>

²² Source: http://www.newworldencyclopedia.org/entry/Tennessee_Valley_Authority

²³ Source: <http://newdeal.feri.org/tva/tva17.htm>

²⁴ Source: http://www.newworldencyclopedia.org/entry/Tennessee_Valley_Authority

eroding and depleting the soil. Crop yields had fallen along with farm incomes, and the best timber had already been cut. TVA was designed to modernize the region, using electricity to combat human and economic problems. During the 1930s, TVA developed fertilizers, taught farmers how to improve crop yields, and helped replant forests, control forest fires, and improve habitat for wildlife and fish. But perhaps the most dramatic change in Valley life came from TVA-generated electricity. From October 1933 through July 1939, TVA began construction on eight dams,²⁵ three²⁶ of which became operational before the end of the decade. Electric lights and modern home appliances made life easier and farms more productive. Electricity also drew industries into the region, providing desperately needed jobs.



None of this was easy. The development of the dams displaced more than 15,000 families, causing resentment and anti-TVA sentiment in some rural communities. Many local landowners were suspicious of government agencies. But TVA successfully introduced new agricultural methods into traditional farming communities by blending in and finding local champions.²⁷

²⁵ Construction began on Norris Dam, Wheeler Dam, Pickwick Landing Dam, Guntersville Dam, Chickamauga Dam, Hiwassee Dam, Kentucky Dam, and Watts Bar Dam during the 1930s.

²⁶ Norris Dam, Wheeler Dam, and Pickwick Landing Dam became operational during the 1930s.

²⁷ Source: http://www.newworldencyclopedia.org/entry/Tennessee_Valley_Authority

1940s - TVA's Contribution to the War Effort

During World War II, the United States needed aluminum to build bombs and airplanes, and aluminum plants were heavy users of electricity. To provide power for such critical war industries, TVA engaged in one of the largest hydropower construction programs ever undertaken in the United States. Early in 1942, when the effort reached its peak, 12 hydroelectric projects and a steam plant were under construction at the same time, and design and construction employment reached a total of 28,000.



The largest project of this period was the Fontana Dam. TVA purchased the land for Fontana from Nantahala Power and Light, a wholly owned subsidiary of Alcoa.²⁸ Electricity from Fontana was intended for Alcoa factories, but TVA also provided much of the electricity needed for uranium enrichment at Oak Ridge, Tennessee, which was required for the Manhattan Project.²⁹

1950s - Growing Demand for Electricity and the Need for More Funding

By the end of the war, TVA had completed a 650-mile navigation channel the length of the Tennessee River and had become the nation's largest electricity supplier. Even so, the demand for electricity was outstripping TVA's capacity to produce power from hydroelectric dams. From its

²⁸ Alcoa (Aluminum Company of America) produces aluminum for various applications.

²⁹ Source: http://www.newworldencyclopedia.org/entry/Tennessee_Valley_Authority

inception in 1933 through most of the 1950s, TVA financed its day-to-day operations and capital requirements primarily through congressional appropriations and limited bond issuances.³⁰ However, according to a TVA Web site, political interference kept TVA from securing additional federal appropriations to build coal-fired plants, and it exhausted its bond borrowing authority by the end of 1940. At that point, it sought other means to finance its goals and missions.

In 1955, President Dwight D. Eisenhower submitted a legislative proposal to Congress that would have allowed TVA to self-finance its power program using “revolving”³¹ borrowing authority.



As noted above, TVA did have some, albeit limited, authority to issue bonds at the time this proposal was submitted, and bonds that were issued in connection with that authority were backed by the full faith and credit of the United States government. According to TVA's OGC, any bonds issued under a “self-financing” arrangement are not considered obligations of or guaranteed by the United States. Like many legislative proposals, the original self-financing bill submitted by President Eisenhower was considered and presented over several congresses before the final version was enacted in 1959.

³⁰ According to OGC, Section 15 of the original TVA Act (1933) gave TVA the authority to issue up to \$50 million of bonds to fund power program capital costs. In 1935, legislation was enacted to add Section 15a. to the TVA Act, which authorized TVA to issue up to an additional \$50 million of bonds to lend money to newly forming municipal or cooperative electric systems in the Valley region to help them develop their distribution systems and connect to the developing TVA transmission system. Finally, in 1939, the TVA Act was modified to authorize TVA to issue up to an additional \$61.5 million for the purpose of purchasing the power system assets owned by four affiliates of what was then known as the Commonwealth & Southern Company, located in the Tennessee Valley region. Any bonds issued pursuant to the above were backed by the full faith and credit of the United States government and were “face value issuance aggregate.” According to OGC, “face value issuance aggregate” does not allow credit for additional borrowing for any debt repayments. For example, assume a \$50 million bond borrowing authority with a face value issuance aggregate limitation. If the issuer borrows \$20 million and repays \$10 million, the issuer can issue only an additional \$30 million in bonds, as the \$10 million debt repayment is not considered in determining the maximum amount that may be issued.

³¹ “Revolving authority,” unlike the “face value issuance aggregate” concept, functions like a credit card or line of credit and allows for additional borrowing equal to reductions in debt principal.



Establishment of Self-Financing Status

In 1959, Congress amended the TVA Act to provide TVA the means to self-finance its power program³² through revenues from

³² In addition, TVA also has nonpower programs, which, as discussed later, provides various public services not

electricity sales. For capital needs in excess of funds generated from operations, TVA was authorized to borrow by issuing bonds and notes. When Congress authorized TVA's self-financing borrowing authority, it also placed a limit on the total amount of such borrowing. This limitation on borrowing authority is known as the "debt ceiling" and represents the maximum amount of "bonds, notes or other evidences of indebtedness"³³ that TVA may have outstanding at any one time.³⁴ At the same time, Congress required TVA to repay over time the unpaid balance of the approximately \$1.2 billion to pay for capital projects completed or initiated prior to 1959. When this legislation was passed in 1959, Congress set TVA's maximum borrowing authority at \$750 million. Documentation of the hearings held in March and June 1959 before the U.S. House of Representatives and Senate Committees on Public Works reveals much controversy over whether TVA should have been granted self-financing bonding authority.

One concern raised during the March 1959 hearing was that bond financing would allow TVA to circumvent the congressional and budgetary controls inherent in the appropriations process. Specifically, Representative William C. Cramer of Florida testified:

It wants to be a Government corporation for the purpose of tax benefits, for the purpose of lower rates and Federal funds, and for the purpose of many other beneficial things, and yet, when it comes to Government control, which has always been exerted over the corporation. That simply because they

directly related to the generation of electricity.

³³ Section 15d. (a) of the TVA Act (16 U.S.C. § 831) provides, "[t]he Corporation is authorized to issue and sell bonds, notes and other evidences of indebtedness (hereinafter collectively referred to as "bonds") in an amount not exceeding \$30,000,000,000 outstanding at any one time to assist in financing its power program and to refund such bonds." As discussed further in this report, there are conflicting views about which financial instruments are included in the phrase "bonds, notes and other evidences of indebtedness" in the context of Section 15d. (a).

³⁴ Source: <http://wordnetweb.princeton.edu/perl/webwn?s=debt%20ceiling>

are now wanting to use a new method of financing, or proposing a bond issue rather than direct appropriations, they do not want to submit themselves to the appropriation controls, when it is nothing but a substitute for appropriations. . .

Another House member from Iowa, Ben Jensen, stated, "This proposal is nothing more than an attempt to bypass the Appropriations Committee and to eliminate the control of the elected representatives of the American people, in Congress assembled."³⁵

Some participants in the hearings were also wary about the implications of bond financing with respect to the unpaid balance of \$1.2 billion that had previously been provided to TVA as appropriations. TVA's Manager of Power G. O. Wessenauer indicated that this amount represented equity and thus would be subordinate to the repayment of bond principal and interest. In response, Representative John F. Baldwin from California posed the following question:

Actually at the present time the taxpayers of the country are what you might call first mortgage holders. They put \$1,200 million into the Tennessee Valley Authority. The Tennessee Valley Authority now owes the first obligation for repayment over a period of 40 years to that. Looking at it from the standpoint of the taxpayers of the country, who put that money in and have that obligation as first mortgage holders, why should they, from their standpoint, want to change their status from first mortgage holders to second mortgage holders, and have the first mortgagee be put in prior to them?

Opponents also expressed lingering uncertainty as to who would bear ultimate responsibility for principal and interest payments on the bonds in

³⁵ Taken from documented testimony of the hearings before the House of Representatives Committee on Public Works, Eighty-Sixth Congress, First Session, on H.R. 3460 and H.R. 3461.

the event that TVA defaulted on the repayment terms. Representative Russell V. Mach from Washington said:

I don't think this provision that the Government will not be responsible for these bond issues is worth the paper it is written on for this reason: The Tennessee Valley Authority is owned and managed by the Federal Government through three directors appointed by the President of the United States and accountable to him and confirmed by the Senate. Under those conditions the Federal Government is certainly going to be responsible and honorbound to pay these bonds if there is any deficit.

Mr. Jensen from Iowa said:

It is also an attempt to create a hydraheaded entity that would have a primary obligation to the bondholders and a secondary obligation to the American people. Its control would rest in the hands of three men not elected by the people, who in effect have more power to control the destinies and welfare of the region within which the TVA operates than do the Governors of the States involved. The proposed revenue bond method of obtaining funds for TVA, bonds without the full faith and credit of the Federal Government back of them, is something new in Federal agency financing. If permitted, it could be the beginning of widespread extension to other agencies of the Federal Government. It is contrary to the provisions and intent of the Constitution of the United States. It is no[t] in keeping with the principles and standards upon which this Nation was founded. I believe that Congress has the right and the duty to pass annually upon the financing of the Federal Government and its various agencies. This right is inherent in the Constitution that provides that "No money shall be drawn from the Treasury, but in consequence of appropriations made by law. . .

In response to opponents against the bill, Charles J. McCarthy, TVA's General Counsel, adamantly stated to the Committee:

If you say to the Tennessee Valley Authority Board, finance capacity you need by issuing revenue bonds, but you have to come to Congress and get what amounts to an appropriation authorizing you to put in so many kilowatts before you can issue any bonds, you are taking that control over engineering and administration out of the TVA Board, and you are putting it in Congress. If that is where Congress wants it, that is one thing; but if Congress is going to exercise that type of control, then TVA cannot operate a power system. . . . If you are not going to give the TVA Board the tools to do the job, then in the name of Heaven take TVA and sell it to the power companies. Don't try to make the Board members do the job with one arm tied behind their backs.

Dissension continued during the June 1959 hearings before the Senate Committee on Public Works when General Accounting Office assistant director E.W. Muhonen testified that:

. . . It is basically undesirable to amend the TVA Act of 1933 in order to authorize the TVA to issue its own obligations to the public for the purpose of obtaining funds to finance the construction or acquisition of facilities for the generation or transmission of electric power.... We have considerable concern over the possible effect of this provision, particularly as it relates to the charges for power and the application and use of net power proceeds, for the reason that it could result in the bondholders having a strong control over the power operations of the TVA. We believe such control would not be desirable in view of TVA's status as a wholly owned Government agency and the fact that about half of its power output is presently sold to the U.S. Government.

To justify TVA's position, TVA Board Chairman Herbert D. Vogel testified that the proposed \$750

million self-financing provision would provide TVA with a—

[d]egree of flexibility in carrying on our operations, a degree of flexibility that is reasonably commensurate with that which people conducting any good business would be expected to have. We want to be able to take advantage of a favorable money market, of a favorable materials market. We want, in other words, to do the most efficient and effective job possible to carry out the purposes of the Congress as stated in the provision that we create or generate power at the lowest possible cost.



Finally, Senator John Sparkman from Alabama, in support of the proposed bill, stated at the June 1959 hearings:

The Government and the power consumers of the valley have invested more than \$1.5 billion in TVA. If this investment is to be properly safeguarded, the managers of the system must have the authority to decide and act quickly. In TVA financing, the freedom to act quickly at times when equipment and materials may be available at favorable prices often would enable the Board to make savings not otherwise possible. It would also offer the great advantage of timing bond issues more advantageously in relation to the money market.

During the hearing, TVA testified that the \$750 million would cover approximately four to five years of construction to meet growing demand, based on an estimated nonfederal use growth rate of 12 percent. At the end of the four- to five-year period, TVA stated that it would likely need to return to Congress to request an additional increase to its debt ceiling.

Increases in TVA's Self-Financing Debt Ceiling

Since establishing TVA's self-financing status in 1959, which authorized \$750 million in "revolving" borrowing authority, Congress has increased the TVA debt ceiling four times between 1966 and 1979, from \$750 million to its present limit at \$30 billion (see Table 9).

Table 9. Increases in TVA debt ceiling, 1959-2010

Year	Debt Ceiling	Increase
Prior to 1959	\$0	\$0
1959	\$750 million	\$750 million
1966	\$1.75 billion	\$1 billion
1970	\$5 billion	\$3.25 billion
1975	\$15 billion	\$10 billion
1979	\$30 billion	\$15 billion
Present	\$30 billion	\$0

Details of each ceiling increase are provided in the following pages.

1966: Additional Bond Borrowing Authority Granted

The 1960s were years of unprecedented economic growth in the TVA region. Farms and

forests were in better shape than they had been in generations. Electricity rates were among the nation's lowest and stayed low as TVA brought larger, more efficient generating units into service. Expecting the region's electric power needs to continue to grow, TVA began building nuclear plants as a new source of economical power. During this decade, TVA began construction on two steam plants, completed construction on two steam plants, and started construction on the Browns Ferry and Sequoyah Nuclear Plants.



Consistent with TVA's anticipation of further growth, in 1966, approximately seven years after the original debt ceiling was established, Congress approved an increase in TVA's bond borrowing authority from \$750 million to \$1.75 billion³⁶ through Public Law No. 89-537. During the two congressional hearings that took place before the bill's passage, TVA explained that it needed the increase for additional capacity necessary to meet the area's continued growth rate of 7 to 8 percent a year in residential, commercial, and industrial establishments. TVA Chairman Aubrey J. Wagner stated that the \$1 billion increase would allow TVA to meet the power needs of the area for the next six to seven years, implying that an additional debt ceiling

³⁶ Interestingly, another bill (introduced by Senator Ross Bass from Tennessee) discussed during the hearings proposed to remove the bond ceiling limitation in its entirety.

increase would be requested at that time. The president of the National Coal Association opposed the bill, urging Congress to cancel it, and stated:

If TVA uses any part of that amount or any revenues from power to construct any additional atomic power plants (other than the one recently announced), *unless and until the AEC [Atomic Energy Commission] shall find and proclaim that additional supplies of low-cost uranium...have been discovered in quantities sufficient to supply the plant lifetime needs of atomic power plants projected to be placed in operation in the next 20 years.*

He stated that support of TVA's nuclear program would accentuate "the problems of Appalachia while at the same time depriving high-cost fuel areas of an opportunity to reduce power-cost differentials."

1970: TVA's Debt Ceiling Increased to \$5 Billion (Public Law No 91-446)

Continued growth in the area prompted TVA to request an additional increase to its bond borrowing authority in 1970. TVA Chairman Aubrey J. Wagner testified at the June 1970 hearing that TVA had 10 million kilowatts of additional generating capacity under construction, which included—

Three nuclear units of 1,150 megawatts each at our Browns Ferry plant near Athens, Ala.; two coal-fired units of 1,300 megawatts each at our new Cumberland plant west of Nashville; two additional nuclear units of 1,220 megawatts each at the Sequoyah site north of Chattanooga; 16 gas turbine units having a total of 350 megawatts to be installed in the Allen plant at Memphis; and a 1,350 megawatt pump storage plant at Raccoon Mountain west of Chattanooga.

Although the administration and the Bureau of the Budget both recommended an increase to

the ceiling of only \$3.5 billion, the TVA Chairman confirmed that such an increase would provide TVA with only 2 to 4½ years of funding. James E. Watson, TVA's manager of power, also stated that the lead time on projects was on average about six years and more bonding authority was needed to meet future capacity forecasts.

Some individuals at the June 1970 hearing expressed concern about how the additional borrowing authority would be used. For example, Representative Don Clausen from California asked how much would be spent to control heat discharge and stack gases and how that would affect the cost of power. Chairman Wagner replied that it could add 20 percent to the cost of electricity. He also stated that there had been no problems with thermal pollution on the Tennessee River, although one plant on the Green River did have some thermal discharge problems that were addressed through the installation of cooling towers. Environmental concerns resurfaced during the August 1970 hearings when Senator Howard H. Baker from Tennessee asked whether TVA had any policies on restraint or conditions on the nature of coal stripping operations as a condition to accepting the coal. The TVA Chairman responded that TVA contracts with coal producers that supplied strip-mine coal required that the land be reclaimed.

In the end, Congress authorized an increase in TVA's debt ceiling to \$5 billion. According to testimony from Alabama representative Walter Flowers, the \$5 billion ceiling would enable TVA to operate for another five to seven years.

**1975: Congress Triples TVA's
Debt Ceiling to \$15 Billion
(Public Law No 94-139)**

TVA appeared before Congress again in September 1975 to request a \$10 billion increase to its debt ceiling, testifying that 21.2 million kilowatts of capacity was under construction or on order to serve the expected growth in power loads. TVA's Manager of Power James Watson stated, "[o]ver the next 10 years the total electrical energy requirements of the region are

projected to increase from 112 billion kilowatts-hours to about 220 billion kilowatt-hours." He also emphasized the dramatic increase in construction lead time for nuclear-fueled steam plants compared with coal-fired steam plants. Specifically, in the 1960s, nuclear-fueled steam plants required nine- to ten-year lead times, compared with three to four years for coal-fired steam plants. At the time of the hearings, TVA stated that the additional capacity on order or under construction included 4 combustion turbines, 4 pumped-storage hydro units for peaking purposes, and 15 nuclear-fueled units.



One individual speaking on behalf of the Vanderbilt University Energy Study Group stated, "[n]uclear powerplants are, by nature, highly capital intensive, much more so than fossil fuel plants of similar size, and any major nuclear construction program constitutes a significant drain on the domestic capital resources of the United States." He also testified:

It is my opinion that TVA's proposed expansion is not only unnecessary but unwise, because it is based on predictions of future peak load requirements that are outdated and inaccurate at best. The kindest word I can find for TVA's demand projections is "chaotic". . . . It is my personal conviction that TVA has been mismanaged into the nuclear corner. A couple of very single-minded administrators have strongly, but not irrevocably, committed TVA to the nuclear option while doing little more than paying lip

service to such intrinsically attractive options as energy conservation and solar energy.

Another individual who represented the East Tennessee Energy Group and Save Our Cumberland Mountains stated:

[A]lthough recent events have shown that the selection of board members can be a vital process, congressional oversight of TVA activities has not been as close as it could have been. TVA's congressional appropriation represents only a fraction of its total budget and TVA's regional character seems to weaken the interest of Congress as a whole in overseeing its activities. As citizens' groups which are interested in improving TVA's accountability to the public, we urge you not to give up any of the small measure of control that presently exists.

He further stated:

[I]n considering such a massive increase in the agency's bonding authority, you are in the position of a corporate director being asked to sign 10 or 15 years of blank checks. It is just not good business . . . [TVA has] an enormous influence on private bond markets and would affect the availability of capital for other energy-related purposes. Congress should maintain its supervision of TVA's bonding authority so it can make sure that capital resources are put to the most efficient possible use.

Based on the testimonies provided at the hearings in 1975, Congress authorized the \$10 billion increase in TVA's debt ceiling to \$15 billion. TVA testified that "additional borrowing authority beyond the presently sought \$10 billion increase will be required within the next 5 years."

**1979: TVA's Debt Ceiling
Increases to \$30 Billion
(Public Law No 96-97)**

TVA projected growth in electricity consumption

in its service area, so in 1979 it requested an additional increase of \$15 billion to its debt ceiling. TVA stated that it needed "the authority to borrow funds to provide for the electrical needs of a growing region as well as to support energy conservation efforts. . . ." In addition, representatives for TVA testified that—

[A] \$15 billion increase in borrowing authority would provide the authority to make the commitments required in the next 5 years to insure [sic] an adequate long range supply of electricity. . . . The legislative history of TVA's requests has been one of seeking adequate borrowing authority to fully finance commitments contemplated in the following 5 years for the power programs. The request for a \$15 billion increase in borrowing authority would be adequate to fully finance commitments made through fiscal year 1985. These commitments would include all of the generating facilities contemplated for 1995 which, because of the 10- to 12-year lead-time for construction, would require action during the coming 5 years.

During the hearings, Senator James Sasser from Tennessee questioned TVA's growth projections based on a General Accounting Office report. According to the senator, the General Accounting Office's high forecast was 17 percent lower than TVA's own forecast, and its low projection of peak demand was 40 percent lower than TVA's own projection.

Ratepayers were also present at the hearings, testifying about their lack of involvement in decisions that directly affected them. A representative from the Tennessee Valley Energy Coalition and the National Council of Senior Citizens stated:

[T]he ratepayers of the Tennessee Valley will bear the brunt of any decision made about TVA's debt ceiling, and thus should have every legitimate right to be heard during these discussions on that decision. . . . Ratepayers have not been privy to any

of these TVA decisions and so our opinion on these matters has not been heard by TVA nor will TVA probably ever ask for it. . . .TVA was established as a regional entity to develop the resources of the Tennessee Valley. TVA must be encouraged to remember its historic commitment to the welfare of the valley citizens. We oppose its recent trend toward considering itself an agency with primarily a national responsibility. Such an orientation is new to TVA and very dangerous and expensive for its ratepayers.

In addition, the representative also:

[urged the] committee to decide that the TVA debt ceiling not be raised any further and that it suggest to TVA it consider delay of Yellow Creek, Phipps Bend, and Hartsville. It ought to better manage its fiscal resources. Further, we urge this committee to encourage TVA to integrate conservation, solar energy, load management, and rate restructure into its power projections and to demonstrate to the Nation, in its role as a yardstick, how these options can reduce the need for electricity.



Although TVA's \$15 billion debt ceiling was ultimately granted, lower-than-expected demand led the TVA's aggressive nuclear program to be scaled back in the 1980s, and since 1979, TVA has not requested additional borrowing authority from Congress. The General Accounting Office report *TENNESSEE VALLEY AUTHORITY*,

Financial Problems Raise Questions About Long-Term Viability (95-134), stated:

TVA made its commitment to nuclear power in the late 1960s and early 1970s, when power sales were growing at a steady rate and were expected to double every 10 years. In the Tennessee Valley, the number of electricity customers rose to over 2 million in the 1960s and about 30 percent of all the homes were heated with electricity. By 1970, TVA customers used nearly twice as much electricity as the national average. At that time, TVA was experiencing an annual growth rate of about 8 percent in demand for electricity, and TVA's forecasts through the mid-1970s were showing continued high growth in demand. TVA believed, along with many in the utility industry, that new generating capacity was needed to satisfy its forecast demand. To meet that need and lessen the environmental problems associated with its coal plants, TVA embarked on a highly ambitious nuclear power plant construction program. In 1966, TVA announced plans to build 17 nuclear units at seven sites in Tennessee, Alabama, and Mississippi. In 1967, it started building the nation's largest nuclear power facility—Browns Ferry in north Alabama. However, instead of increasing, electricity consumption declined in the mid-1970s following the 1973 energy crisis and again in the late 1970s and 1980s as a result of higher energy costs and lower economic growth.

As noted above, because of federal budgetary principles, TVA's expenditure of increased borrowings is presented in the budget as being equivalent to TVA's receipt and expenditure of congressional appropriations and would cause an equal increase in the overall federal budget deficit that currently exists. However, in response to our draft, TVA management stated that during the 1979 hearings, there was an EPW Committee report that recommended TVA's borrowing authority be treated neither as budget authority nor outlays in the federal budget and recognized

that TVA's borrowing should not contribute to the federal budget deficit. According to TVA, the report states:

The committee report, includes, as does the President's budget, this item of \$15 billion for increased debt authority for the Tennessee Valley Authority. These funds are not, however, generated through the general treasury and do not affect fiscal policy. The Tennessee Valley Authority Act, section 15(d), specifically provides that the debt obligations of TVA shall not be or become obligations of or guaranteed by the United States. TVA's debt is secured solely by revenues from the sale of power. The committee has included the amount here in order to be consistent with the administrative and congressional budget processes, but renews its request (as made in 1975-Senate Report No. 94-461) that in the future this item be carried not as "budget authority", but as a separate item in a manner consistent with the Tennessee Valley Authority Act, as amended.

2000: The Elimination of Appropriations Funding of TVA's Nonpower Program

In addition to its core business of electricity generation ("power program"), TVA also performs stewardship activities related to management of the Tennessee River system ("nonpower program"). Specifically, the TVA Act states, among other things, that TVA was established—

To improve the navigability and to provide for the flood control of the Tennessee River; to provide for reforestation and the proper use of marginal lands in the Tennessee Valley; to provide for the agricultural and industrial development of said valley; to provide for the national defense by the creation of a corporation for the operation of Government properties at or near Muscle Shoals in the State of Alabama, and for other purposes.



As part of its nonpower program, TVA provides various public services, including management of the natural resources of the Valley for the benefit of the region and the nation. Specifically, TVA manages the Tennessee River system and associated public lands to reduce flood damage, maintain navigation, support power production and recreational uses, improve water quality and supply, and protect shoreline resources.

Until FY 2000, TVA's nonpower program was historically funded through federal appropriations. However, in June 1997, the U.S. House of Representatives met to discuss the future of TVA's nonpower programs, including the issue of how it should be funded and who should be responsible for these stewardship activities undertaken by TVA. Earlier in that year, TVA Chairman Craven Crowell "had suggested that the Congress eliminate the \$106 million appropriation that support[ed] TVA's non-power program." Representative Sherwood L. Boehlert from New York stated:

...the primary focus of today's hearing will be on the various proposals that have been forwarded to phase out much of TVA's involvement in non-power programs such as flood control, recreation, and navigation. Though I believe that TVA's role in these programs will change, I also believe that the Federal Government must continue to support and manage critical flood control, navigation, and recreational activities within the Tennessee Valley. The elimination of

TVA's appropriation for non-power activities is an issue that is on the table and one that must be considered carefully. However, the termination of important navigation and flood control programs is not on the table. There is a very strong Federal interest in flood prevention and efficient navigation that we cannot abandon. TVA's role in these activities will change, but the Federal Government's commitment to these activities will remain.

Robert A. Borski, a representative from Pennsylvania, also stated:

Some have suggested that TVA should narrow its focus to the core business of power generation to become America's power company. Others disagree. They point out that TVA's non-power program of navigation, flood control, economic development, and resource conservation are essential to the original mission of the agency. Unless and until Congress amends TVA's organic act, TVA must continue to fulfill its Congressional mandate of providing non-power program services to the people of the Tennessee Valley.



Some individuals participating in the hearing were against Chairman Crowell's proposal to eliminate appropriations funding for TVA's nonpower program. For example, Tennessee Representative Zach Wamp stated:

...Chairman Crowell made a proposal

that, frankly, I think, in the opinion of the majority of the TVA Caucus members, is not acceptable in that it eliminates funding from the Federal Government without clearly defining who then would pick up those responsibilities for land and water stewardship, who would manage the Land Between the Lakes³⁷—these issues that are absolutely critical to the people of the seven-State region... The Federal Government owes it to the people to maintain that, as they do in other parts of the country, so there is no savings to eliminate these essential programs and funding.

Another representative from Tennessee, Ed Bryant, stated:

I realize that most of us here today are committed to fiscal prudence and where we can, to reduce the cost and the size of the Federal Government. But where Land Between the Lakes is concerned, it seems to me that there's not a lot of room for savings. I feel the Federal Government has an obligation to the public to continue its role at the Land Between the Lakes... I very strongly support the TVA's management style of this area in that they have adopted a multi-use purpose so that it's open to the public for many, many uses. Certainly, my constituency—and I know Congressman Whitfield's constituency in Kentucky—very much support this management plan, and I would hope that my other colleagues on both sides of the aisle would agree with me on this point... For the record, I am comfortable with TVA's style, as I said earlier, and am somewhat reluctant, as Congressman Wamp has mentioned, to pass these responsibilities

³⁷ The Land Between the Lakes National Recreation Area is a United States National Recreation Area located in Kentucky and Tennessee between Lake Barkley and Kentucky Lake. The area was designated a national recreation area by President John F. Kennedy in 1963. The recreation area was originally managed by the TVA, but jurisdiction has since been transferred, effective October 1, 1999, to the United States' Department of Agriculture's Forest Service.

on to other Government agencies all at once, because the Land Between the Lakes is not going to go away.



Another Tennessee representative, Bart Gordon, offered similar testimony:

...over the years TVA has done many positive things for our region but has also made a lot of mistakes along the way. I think that the Board is moving in a good direction now; however, I think a mistake—and one of those mistakes was the recommendation to do away with the non-power revenue appropriation...As my friend Zach Wamp says, it was really built on a false premise to think that doing away with this appropriation means that the responsibilities of water management, flood control, stewardship of the lakes, the rivers, and the public lands—it doesn't go away. It's still there. It's still a public responsibility, whether it's done by the Corps of Engineers or by the TVA.



Perhaps the harshest testimony against Chairman Crowell's proposal was provided by Bob Clement, another representative from Tennessee:

Early this year, after consultation with OMB and no consultation with the Congressional delegation, Chairman Crowell announced that TVA favors cutting off its appropriated funding after fiscal year 1998 for the non-power programs. Chairman Crowell's proposal opens up Pandora's Box to much broader and challenging issues than merely saving TVA's appropriated dollars. It will now be TVA's task to defend itself against those who will say, "If Tennessee is now just a Federal utility, why shouldn't it be privatized?" Even that one would be a decent question to ask if it were not for the \$27 billion debt which will keep it from competing with other private investor-owned utilities in the country. If Chairman Crowell's real agenda is to make TVA competitive in a deregulated utilities market by chopping off its non-power programs, I question the wisdom of the proposal. I do not believe there is a direct link between TVA's ability to compete and its sustainment of the non-power programs.



overseeing your rates, that you would make those decisions and you would be totally in charge with no oversight at all.

The TVA Chairman responded:

...I'm sitting right here right now in front of this committee in an oversight hearing. I certainly don't know where anybody could have gotten that idea. I mean, we are owned 100 percent by the U.S. Government. This is our oversight committee. We have an oversight committee in the Senate. We are appointed by the President...My whole direction since I've been Chairman at TVA is try to prepare TVA for deregulation into the next century...This proposal was all part of the preparation for the future.

Clement also questioned the motives surrounding the TVA Board's proposal. Specifically, he stated:

Chairman Crowell and Director [William H.] Kennoy and Director [Johnny H.] Hayes, I know what a tough job you've got. I was there, and a lot of you know I'm a former TVA Board member, and I know it's a tough job, but I'll say, in recent months I've been awfully disappointed, particularly when I feel like I got the shaft and a lot of other people did, Chairman Crowell, when you went around us and went directly to the Office of Management and Budget, didn't consult with any of us, and some would say sold us down the river in terms of going from \$106 million a year in appropriated funding dollars for important programs such as flood control and navigation and recreation and environmental protection and operation of Land Between the Lakes—and a lot of those people were forced off their property to create that beautiful area, and then TVA reneged on its commitments from the past. But I have to ask you, you know, a lot of people think there was an ulterior motive, that you didn't want to be—you felt like if you could zero out appropriated dollars and get away with it, that you wouldn't have to have any oversight authority any more over TVA. TVA directors could go their merry way and make whatever decisions they want to make, since you don't have a public service commission or public utilities commission

Other participants believed that TVA should continue to take on stewardship activities without the benefit of appropriations and internalize the cost of those activities. Sherman Boehlert, a representative from New York, stated:

...other witnesses testifying today have suggested in their written testimony that merely divesting TVA of its non-power programs will not adequately address the competitiveness concerns of shareholder-owned utilities and will not end the perception that TVA is subsidized. They believe that the only way to level the playing field is to make TVA internalize the cost of its non-power programs, as they assert other power companies already do...As we look at the history of the whole program, we applaud FDR [Franklin Delano Roosevelt] for what he did, his foresight, but let me tell you, you guys are doing quite well down in Tennessee these days, and in the northeast we're hurting somewhat, and one of the reasons we're hurting is because of the differential in power cost, and one of the reasons why we have a differential in power cost is because I think a clear case can be made that you guys get subsidies and we don't.

Another representative from Michigan, Vernon J. Ehlers, voiced similar concerns:

...it just seems to me that the people of that area are getting substantial benefit from the operation of the TVA. They're getting relatively low electricity rates. They're getting a lot of other public services. It concerns me to have taxpayers from the rest of the Nation paying for the ancillary activities when, in fact, that area is benefitting a great deal from having the project there. If statutory change is necessary to allow them to pay for the ancillary activities out of the rate revenues, I think that would be appropriate.

to refinance \$3.2 billion of its debt, saving TVA well over a billion dollars in interest payments over the next decade. According to Chairman Crowell, this savings put TVA "in position to fund its essential river and land stewardship activities without appropriated funds."



In October 1997, Congress passed legislation that directed TVA to fund essential stewardship activities related to its management of the Tennessee River system and TVA properties with power funds in the event that there were insufficient appropriations or other available funds to pay for such activities in any year. During FYs 1998 and 1999, TVA's appropriated funding for nonpower programs decreased to \$70 million and \$50 million, respectively. Beginning in FY 2000, TVA paid for essential stewardship activities primarily with power revenues. The remainder was funded through user fees and other forms of revenue derived in connection with those activities. In addition, in a speech delivered in March 1999, Chairman Crowell stated that the Congress and the Administration allowed TVA

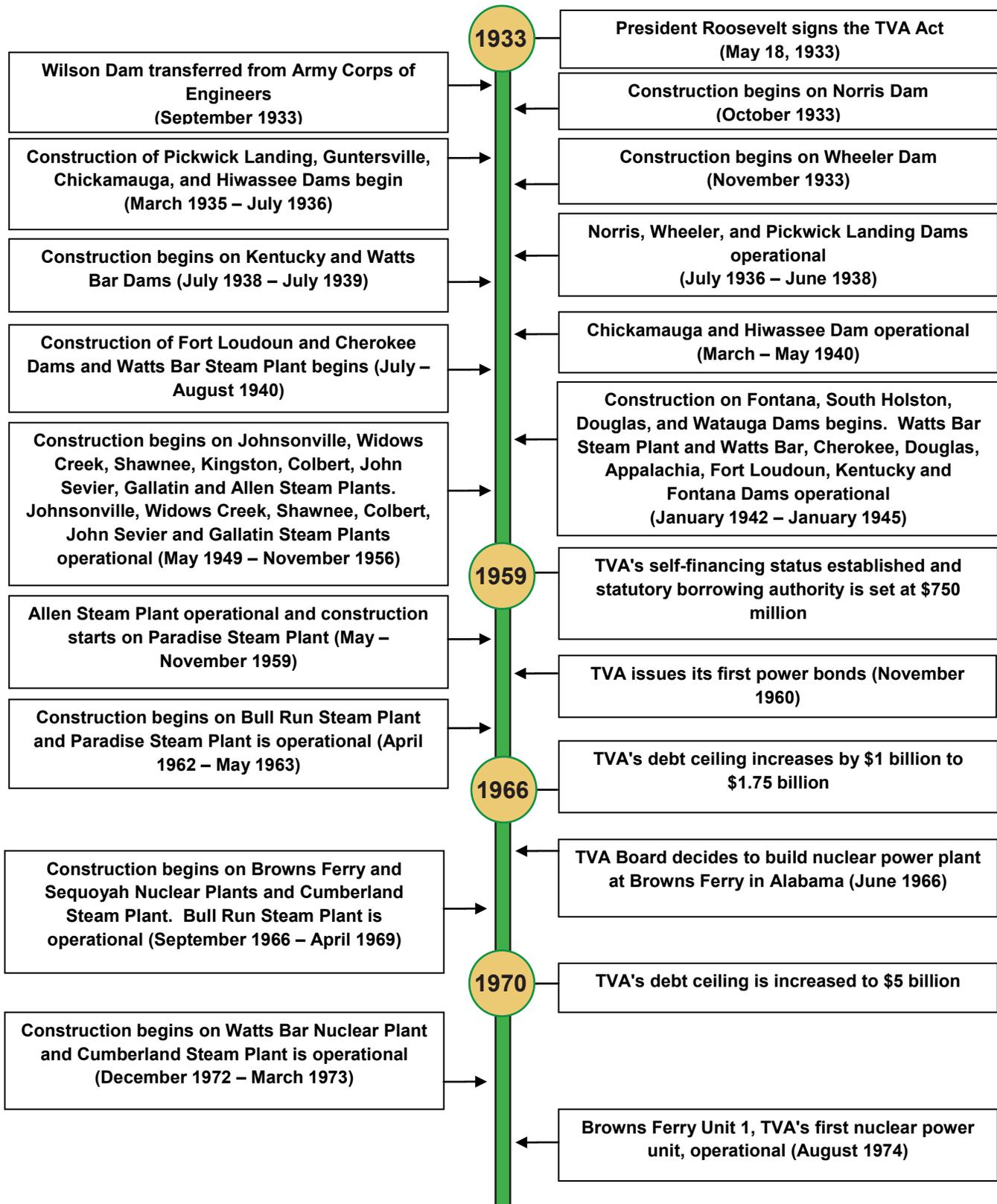
TVA MANAGEMENT COMMENTS ON THE DRAFT REPORT AND TVA OIG RESPONSE

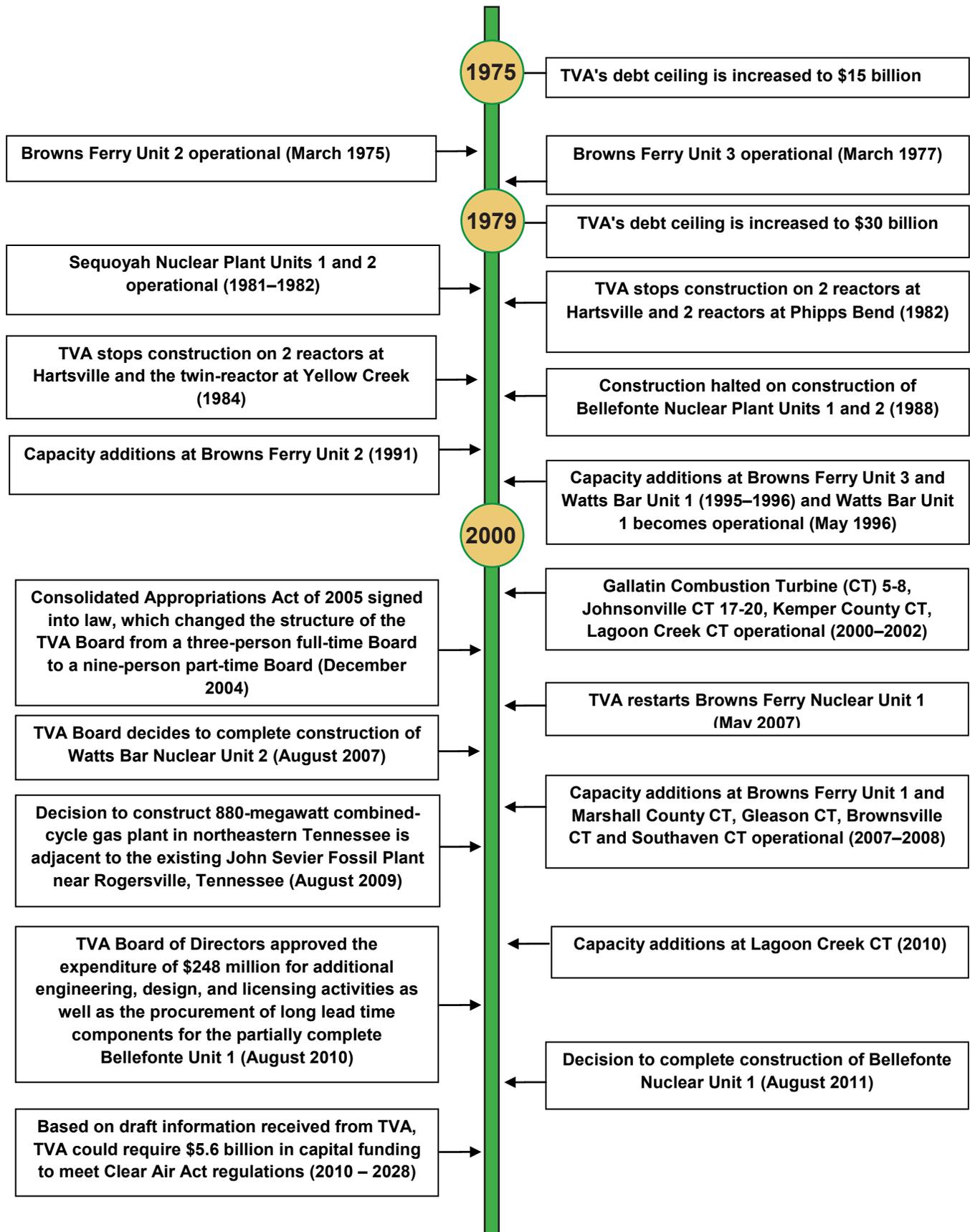
TVA management provided a response to our draft (see Appendix B) that included clarification items and additional information to underscore certain areas. We evaluated each comment with the following dispositions:

- Comment a: TVA management suggested inclusion of information related to the repayment of TVA's original power system investment. We believe this is an important component of TVA's overall financial management and further demonstrates its ability to repay its obligations. We have included this information in the "Background Observations" section.
- Comment b: TVA management provided examples of internal and external controls to mitigate the risk that bond issues do not exceed the debt ceiling. We included these controls in the *Ramifications of Issuing Debt Above the Debt Ceiling* section. However, we did not verify whether these controls are in place and operate effectively.
- Comment c: TVA management stated that the FY 2012 President's Budget specifically excluded alternative financing obligations, such as lease-leasebacks and prepayments, from being part of TVA's statutory debt. As mentioned above, the statutory debt classification has historically been a controversial topic, and therefore we agree with TVA management that the current Administration's stance on this subject be included in the report.
- Comment d: Regarding the pension funding shortfall issue, TVA management stated that (1) TVA made an advance contribution of \$1 billion in 2009 that fulfilled its obligations for FYs 2010 through 2013, and (2) TVA's Board of Directors approved a discretionary contribution of \$270 million for FY 2011 and delegated authority to the CEO to approve a discretionary contribution for FY 2012. We included both of these items in the *Pension Funding Shortfall* section. However, while these items may help to alleviate the pension funding issue, depending on market forces and benefit payments, additional funding may be necessary to achieve and maintain a healthy and solvent pension fund.
- Comment e: TVA management stated that documents from the 1979 hearing to increase TVA's debt ceiling to \$30 billion revealed confidence in TVA's plans. We acknowledge that there were supporters of the increase who believed in TVA's future plans; hence, the passage of Public Law No. 96-97. Accordingly, we focused mainly on those individuals or groups that offered constructive criticism to provide examples of opposing views at that time. In addition, TVA management identified an Environment and Public Works Committee report that recommended that TVA's borrowing authority be considered neither budget authority nor outlays in the federal budget and recognized that TVA's borrowing should not count toward the federal deficit. We included the Environment and Public Works Committee recommendation in the "TVA's History" section.

APPENDIX A

A Timeline of TVA's History: 1933 Through 2010





APPENDIX B

September 27, 2011

Richard W. Moore, ET 4C-K

TVA COMMENTS - EXTERNAL PROJECT 2009-13007-01 - TVA's FINANCIAL FLEXIBILITY

This provides management's response to the subject draft external project report dated September 12, 2011.

Thank you for the review of TVA's need for financial flexibility. As TVA strives to provide more information about important issues to its stakeholders, your report presents a substantive discussion of one of the most critical issues currently facing TVA.

The report's executive summary highlights the importance of financial flexibility to achieving TVA's renewed Vision to lead the region and nation toward a cleaner and more secure energy future. We agree a primary challenge TVA faces under the current debt ceiling is meeting all of its customers' and stakeholders' future needs while maintaining its mission to provide rates as low as feasible.

We agree with the report's conclusions:

- TVA should maintain maximum financial flexibility by adhering to its financial guiding principles, pursuing multiple options and strategies to achieve the most economical approach, and preserving debt as a viable option in future financing decisions.
- TVA's financial health should support additional debt to meet energy demands as long as TVA maintains its ratemaking authority, service territory and customer base.

The following offers further clarifications:

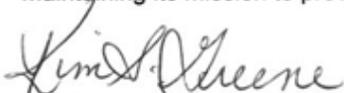
- a. We believe that it is important to highlight TVA's repayment of its original power system investment, as well as the additional "return" payments made by TVA on the outstanding balance of that investment. Of the \$1 billion amount of investment that TVA is required to repay, only \$70 million remained unpaid on September 30, 2010. In this manner, by 2014, TVA will have paid a total of more than \$3.6 billion to the U.S Treasury and will continue making payments on the remaining \$258 million power program investment.
- b. Internal and external controls ensure that TVA's bond issues are within its debt ceiling limit. Before bonds are issued, these controls require legal opinions from outside counsel and TVA's General Counsel on the validity of the debt, as well as approval by the U.S. Treasury.
- c. The report suggests some uncertainty about the treatment of TVA's alternative financing (debt-like) obligations as statutory debt. However, as recently as the President's FY2012 Budget, the Administration specifically excluded alternative financing obligations, such as leases and prepayments, from being part of TVA's statutory debt. According to page 1307 from the President's FY2012 Budget Appendix for Independent Agencies, "At the beginning of 2011, TVA currently has \$2.2 billion in debt-like obligations that are not counted against its statutory debt cap." We agree with that distinction.

Richard W. Moore
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September 27, 2011

- d. The report lists the shortfall in TVA's qualified defined benefit pension plan as another challenge facing TVA. It should be noted that, to address this shortfall, TVA made an advance contribution of \$1 billion in 2009 that fulfilled its obligations for fiscal years 2010 through 2013. Additionally, TVA's Board of Directors approved a discretionary contribution of \$270 million for fiscal year 2011 and delegated authority to Tom Kilgore as Chief Executive Officer to approve a discretionary contribution for fiscal year 2012.
- e. The report's "TVA's History" section suggests that TVA's debt ceiling increase in 1979 was controversial. Documents from the hearing, however, also reveal confidence in TVA's plans. Additionally, the Environment and Public Works Committee's report recommended treatment of TVA's borrowing authority as neither budget authority nor outlays in the Federal Budget and acknowledged that TVA's borrowing should not contribute to Federal Budget deficits:

The committee report, includes, as does the President's budget, this item of \$15 billion for increased debt authority for the Tennessee Valley Authority. These funds, are not, however, generated through the general treasury and do not affect Federal fiscal policy. The Tennessee Valley Authority Act, section 15(d), specifically provides that the debt obligations of TVA shall not be or become obligations of or guaranteed by the United States. TVA's debt is secured solely by revenues from the sale of power. The committee has included the amount here in order to be consistent with the administrative and congressional budget processes, but renews its request (as made in 1975 – Senate Report No. 94-461) that in the future this item be carried not as "budget authority", but as a separate item in a manner consistent with the Tennessee Valley Authority Act, as amended.

In conclusion, we express our appreciation for the report's recognition of TVA's need for financial flexibility in order to meet the needs of its customers and stakeholders while maintaining its mission to provide affordable rates.



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