TVA Retirees Chapter

# TVA Pension Underfunding: History, Causes, and Implications
## Position Paper
## April 2016

**by**

## Tennessee Valley Authority Retirees Coalition (TVARC)
## NRLN TVA Retiree Chapter

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**Abstract**

Misinformation and lack of understanding of the TVA pension system (hereinafter referred to as TVA pension or pension) has caused confusion and made it difficult to discern what needs to be done to fix the problem. This paper examines the TVA pension financial condition over the past 30 years, identifies a number of factors involved in the situation, points to primary and underlying causes, assesses potential options going forward, and makes recommendations.



**Summary**

The TVA pension funding ratio has declined from highs above 150% to a low of 53% in 2015. This paper reports the following:

- Examination of TVA pension funding from 1985-2015
- The primary cause of TVA pension funding decline is a 20-year pattern of inadequate TVA funding.
- This is consistent with findings of a 2010 TVA Office of the Inspector General (OIG) Audit Report.
- The 2009 TVA pension changes and intermittent TVA contributions have not improved the situation.
- Underlying causes of TVA pension underfunding include lack of a corporate goal and limited personal stake by TVA executives and directors.
- There are concerns regarding compliance with the TVA Act regarding TVA pension funding.
- Changes in long term policy and procedures are needed, not changes based on the TVA pension funding crisis of the year.
- **The single driving force leading to deterioration in plan funding was a continued disregard for actuarially driven funding as a basic discipline that should have been adhered to by both TVA and TVARS.**
- The minimum required TVA pension contribution to comply with the Act, TVARS rules, and actuarial principles should be defined clearly. There should be no negotiated compromises.
- Among possible remedies, the one most likely to be effective is legislation to place TVA under the Employee Retirement Income Security Act (ERISA) and Pension Protection Act (PPA) requirements.

**Therefore, the TVARC asserts that Congress must take action to either declare TVA must be governed by ERISA and PPA or declare that TVARS rules must be rewritten to assure that ERISA and PPA rules are adopted by TVA and TVARS.**


**Outline of Paper**

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## A. Purpose of the Paper

The severe underfunding of the TVA pension system has understandably resulted in much controversy. Unfortunately, much of the discussion of this issue has tried to address remedies without first recognizing the underlying causes of the problem. Equally unfortunate, as described in Section E(7), recent correspondence from some elected officials contains ambiguous information and suggests that they misunderstand the roots of the problem.

This paper seeks to provide a clear long-term perspective of the problem, identify significant contributing factors, and provide a basis for assessing potential remedy.

## B. The TVA Act

It is appropriate to begin by asking how pension funding should be done under TVA's enabling legislation, the Tennessee Valley Authority (TVA) Act of 1933 ("the Act")[1].

Sections 15 d (a) and 15 d (f) of the Act address TVA's rates, payment of costs, and payments on TVA's bonds. Appendix 1 discusses in detail how these sections of the Act affect pension costs.

Simply put, these sections of the Act mandate that TVA must design its rates to cover all its costs, that TVA should then use the resulting funds collected from its ratepayers to pay those costs, and that bond payments are to be made by TVA only after all costs have been paid. Of course, TVA pension costs are subject to these mandates of the Act.

**It is difficult to see how the TVA pension could be severely underfunded if TVA had always complied with the mandates.**

From 1940 to 1987, recovery of pension costs and pension funding were consistent with the above mandates. However, in the past two decades, there were a number of years in which actual pension funding appears to conflict with the aforementioned mandates. Section G of this paper discusses several recent years in which the mandates do not appear to have been satisfied. **However, it should be noted that a policy change by TVA applicable to fiscal year (FY) 2015 and future years appears to ensure that TVA will again comply with the Sections 15 d (a) and 15 d (f), as it did from 1940 to 1987**

## C. Prior Signs of the Problem

In 2009, the TVA pension funding problem caused TVA to propose a fix, which the Tennessee Valley Authority Retirement System (TVARS) approved. The fix included a $300 million reduction in pension benefits[7], accompanied by a TVA contribution of $1 billion which was to cover a four year period. A lawsuit was filed regarding several aspects of this change, including reductions of a cost of living adjustment (COLA) benefit which plaintiffs maintained was vested. The judge ruled[2] that no applicable law would provide a remedy for plaintiffs, yet called attention to the implausibility of that conclusion. The case is currently under appeal.

An article[3] published in Pensions & Investments magazine in May 2014 showed that the underfunding of TVA's pension was noticeably worse than any neighboring large utility. An updated comparison is shown in Figure 1, Section M. Figures and Tables, Page 10. All but one competitor is funded above 80%, which is to be expected since the competitors are all subject to ERISA regulation.

In December 2015, TVA again proposed a fix which included additional $700 million benefit cuts (averaging $20,000 per employee and retiree) accompanied by a promise of increased TVA annual contributions to the pension and a clear threat to terminate the pension system if the TVA proposal were rejected. That proposal prompted an outcry of protest from TVA employees and retirees. TVARS has made a counterproposal. Nothing has been decided. The confusion and misinformation in this situation was a key reason this paper was prepared.

**D. When the Problem Really Began**

Pension funding must be viewed with long-term perspective, such as 30 years. Figure 2, Section M. Figures and Tables, Page 10, shows that the TVA pension was adequately funded prior to 2001. Assets grew rapidly enough to stay above liabilities. The funding ratio was usually about 120% to 140%.

A dramatic change began in 2001. Assets declined sharply in 2001. There was a steep initial decline in funding ratio, followed by a more gradual further decline which has continued through 2015. In this paper, “the Great Decline” refers to the continuing decline in funding ratio which began in 2001.

It appears that the 2001 collapse of the dot-com bubble in stock prices was the initiating event for the Great Decline. But the pension funding status did not rebound as well as stock prices did after that bubble burst. Why? And what happened before and after 2001 which would likely be factors leading to the Great Decline? The following Section E explores such factors.

**E. What Contributed to the Great Decline?**

The paper will address candidate factors in somewhat chronological order.

(1) TVA pension liability has steadily increased throughout the history of the pension, as shown in Figure 2, Section M. Figures and Charts, Page 10. Unless the assets likewise increase (and they did not for the pension after 2001), the funding ratio will decline due to increasing liability.

Numerous factors have contributed to the increased liability. Those factors are too complex to address in this paper, but they include such things as actuarial assumptions, mortality tables, changes in accounting standards, economic conditions such as interest rates and return on investment, changes in workforce, increasing salaries, increased pension benefits, and others. Most of those factors are beyond the control of TVA.

(2) A substantial decline in TVA funding had begun about 10 years earlier. Throughout the 1970s and 1980s, TVA contributed 10% to 11.5% of payroll to TVARS[5]. Participant contributions averaged 4% to 6%. TVA’s contribution had reduced to 6.7% in 1991 and was zero in 1997 and again in several later years. This fostered a dangerous mindset (see next paragraph). Figure 3, Section M. Figures and Tables, page 11, shows that cumulative TVA contributions were relatively flat compared to investment gains which kept increasing. Had TVA continued the previous higher level of contributions, investment gains would have been even greater and the pension would have been much better able to survive future market declines.

(3) There was an expectation within TVA and TVARS that the large investment gains experienced in earlier years would continue, at least to the extent that the funding ratio would remain good without additional TVA funding. Evidence of this is given in sections E(4) and E(5) below.

(4) TVA pension benefits were increased during 1998-2000, increasing liability by $750 million.

(5) In 1998, TVA decided that it would not be necessary to make any additional contributions to the pension through 2007. According to a 1999 GAO report[6] on that business plan, the decision was based on FY98 TVA pension overfunded status. (The business plan was intended to improve future economic competitiveness by addressing high fixed financing costs and large investment in nonproducing and other deferred assets.) Despite the problems described in the next paragraph, the plan for zero pension funding was mostly followed. In addition to zero TVA funding in 1997, there were 5 years of no funding followed by 4 years of very low TVA funding.

Early in the 10-year period, the dot-com bubble burst and pension funding status dropped dramatically. The Great Decline in TVA pension funding had begun.

Figure 4, Section M. Figures and Tables, Page 11, shows the horrific cash flow pattern which has since occurred. The pension funding ratio declined to 77% by 2008 and to 53% by 2015.

(6) Great fluctuations in financial markets had major impacts on pension asset value. During the past 20 years, two strong U.S. bull markets gave way to two of the most brutal bear markets in recent memory: the collapse of the dot-com bubble in 2000 and the global financial crisis that began in 2007. The impacts of these market declines upon pension assets are obvious in Figure 2, Section M. Figures and Tables, Page 10.

(7) Investment market fluctuations, while significant on a yearly basis, long term have **<u>not</u>** been a major factor in TVA pension underfunding. As shown in Figure 3, Section M. Figures and Tables, Page 11, the cumulative investment gain over many years has far exceeded the amount which TVA has contributed to the pension.

This chart is also relevant to the incorrect statements (see Section A of this paper) in letters from members of Congress that in 2015 the investment loss for the pwas $762 million and, by implication, a major contributor to the deterioration in TVA pension funding. TVA's 2015 financial report (Securities and Exchange Commission (SEC) form 10-k) shows on page 124 that the actual investment loss was $325 million. In the perspective of this chart, that appears as a minor blip.

The figure of $762 million loss on pension investments does appear in the SEC 10-k on page 71 under "Expected return on plan assets". There it says that the "actuarial gain (loss) related to the difference between expected and actual return on pension plan assets for 2015 . . .was $(762) million". For anyone to exaggerate the effect of TVA pension investment losses by using the "actuarial loss" figure instead of the actual loss is highly misleading.

(8) The underfunding problem is not due to any single individual, small group of individuals, or position of authority within TVA. It has persisted and worsened through several changes in CEOs, other TVA executive officers, TVA directors, and TVARS directors. The problem must have resulted from underlying causes which transcend those changes in personnel.

(9) On several occasions there have been changes made to the TVA pension benefits in order to entice early retirements in connection with TVA workforce reductions. It is possible that when those changes were made, the financial impact upon the pension funding may not have been adequately understood or TVA may not have sufficiently increased its funding contribution in order to fund those benefits. This investigation was unable to evaluate that. However, the 2010 TVA OIG audit[7], described in Section I, cited this as a major factor in the pension funding problems it investigated.

(10) Two problems are evident regarding the Rules and Regulations of the TVA Retirement System ("TVARS rules")[10].

First, the ruling[2] in the 2009 lawsuit (discussed in Section C) held that the stipulations of the TVARS rules could not be enforced by that court. TVA pension plan participants were found to be without judicial remedy for violation of the rules. The TVARS rules should be made legally enforceable.

Second, there is great uncertainty regarding the minimum required TVA pension contribution according to the TVARS rules. Sections 9.B.1, 9.B.2, and 9.B.3 (pages 51-52) clearly state that the TVA pension contribution is to include a “normal contribution” and an “accrued liability contribution”. The accrued liability contribution is to sufficient to eliminate any excess liability over a 30 year period.

However, 9.B.8 (pages 52-53) says that after TVARS determination of the contribution amount, TVA will determine whether contributions at the rates so determined or any contribution shall be made for such fiscal year. Some would say that if TVARS recommends a non-zero contribution and TVA then decides to make no contribution, that would mean TVA termination of the TVA pension system by TVA.

There have been a number of years in which TVA made no pension contribution (see Figure 4), yet the pension was underfunded and the TVARS rules would have required both a normal and an accrued liability contribution. As noted in the last paragraph of Appendix 1, we lack information which would explain what discussions and decisions were made by TVA and TVARS in those years, as well as whether those decisions complied with the TVARS rules or the Act.

There is a great need for clarification of, and compliance with, the requirement for adequate TVA pension contributions.

## F. Goals and Incentives

(1) It appears that none of TVA’s corporate goals (see 2015 SEC 10-k page 160) are related to adequate TVA pension funding status.

(2) Before the Great Decline, TVA’s top executives and full-time board members were participants in TVARS and had no other retirement benefits (such as the Supplemental Executive Retirement Plan (SERP) and deferred compensation plans) to dramatically boost their retirement income. They had a personal stake in the TVA pension funding status. Now, part-time directors are in the Federal Employee Retirement System (FERS) rather than TVARS, and TVA executives have other, far more lucrative retirement benefits. So the personal stake of these individuals in TVA pension funding has, for practical purposes, vanished.

(3) In businesses subject to ERISA, if the pension funding is inadequate, then IRS 409A would impose very significant tax penalties upon deferred compensation of the company’s executives. Currently TVA executives are deemed not subject to such penalties. TVA deems its executive deferred compensation plan to be in compliance with IRS 409A regardless of the TVA pension funding ratio, apparently because TVA is not subject to ERISA[8].

## G. Funds Collected for Pension but Not Contributed to Pension

Table 1, Section M. Figures and Tables, Page 12, shows a comparison of the annual amounts of TVA pension costs collected from ratepayers and the amounts actually contributed to the pension during 2002-2015. This comparison was done in order to assess compliance of TVA pension funding with the mandates of the Act as discussed in Section B. During this period TVA collected $3.598 billion from its ratepayers specifically cover pension costs, but transferred only $2.232 billion of those funds to the pension. It appears the remaining $1.366 billion funds were used to fund other TVA costs. Not using those funds for the pension appears to be inconsistent with the TVA Act as discussed in Section B.

However, a new policy took effect in 2015 (reference 2014 SEC 10-k page 98] which appears to bring TVA into compliance with the mandates described in Section B. Table 1 reflects than in 2015 $283 million was collected from ratepayers for the pension and that amount was put into the pension. However, the new policy does not address years prior to 2015.

**H. TVA and TVARS Share Responsibility**

All the TVA pension funding has to come from TVA, so the paper addresses a pension funding problem. That is not intended to rule out TVARS as a potential factor in the problem.

TVA and TVARS each have a degree of responsibility for the pension funding problem. The TVARS board includes three directors appointed by TVA, three elected by employees, and one chosen by the other six. The TVARS rules call for TVARS to recommend the annual TVA pension funding, but TVA is not required to contribute as much as TVARS recommends.

It appears that there has been considerable informal and undocumented communication between TVA and TVARS regarding funding. For those years with reduced or zero TVA pension contribution, information available was not sufficient to consistently determine what funding level was recommended by TVARS, the reason for a reduced funding level, whether TVARS agreed with the reduced funding level, or the extent of differing views among TVARS directors.
.
Therefore, this paper does not attempt to differentiate between the responsibilities of TVA and TVARS.

**I. TVA OIG 2010 Audit Report**

This work for this paper was done independently of the 2010 TVA OIG audit report[7], taking a somewhat different approach from a different perspective. That led us to some additional findings and insights. However, the OIG report serves as a very useful reference point.

The OIG auditors obviously had available much greater time and manpower and benefited from vastly greater access to information. But their work appears to have been a bit more narrow in scope and time frame. Perhaps the most important difference is that today we have 6 more years of TVA pension history to learn from.

Despite the differences and the passage of 6 years, we believe that the OIG audit report supports many of the findings in this paper.

The OIG audit report said:

> "We also determined that a combination of factors resulted in TVARS experiencing a significant shortfall between assets and projected obligations and being funded at a lower level relative to obligations than most other comparison utilities. Four factors contributed to this shortfall. Specifically, (1) not making contributions to TVARS in six years, (2) adding significant benefits to the plan when the funding status was better, (3) making TVARS rules that had the effect of enticing employees to retire, and (4) the market crash of 2008 and early 2009 resulted in the funding shortfall."

Six years later in 2016, look at how those factors have changed:

- The second factor, prior benefit additions, is six years further in the past. Now there have been significant benefit reductions in 2009 and further cuts seem likely to result from discussions between TVA and TVARS.
- The third factor, TVARS rules changes to entice employees to retiree, are no longer in effect or relevant.
- The fourth factor, the market crash circa 2008, has been replaced by a much milder market decline in 2015.

The only one of the four factors which has remained operative is the reduced or missing TVA contributions to TVARS.

After six years and three of the four factors having gone away, the pension funding situation is significantly worse. The funding ratio has declined further, and TVA's ranking compared to other utilities is worse.

The OIG report made several additional significant statements. Some of them are mentioned here, but the reader should consult the OIG report for the details.

- If TVA were subject to the Pension Protection Act of 2006 (PPA), higher TVA contribution levels would likely have been required of TVA (pages 5-6).
- The PPA generally established a 100% funding ratio target with a 7-year amortization of excess liabilities (page 6).
- Had TVA made the same 11.54% of payroll contribution to TVARS as it did for employees under FERS during 1990-2009, the TVA pension assets would have been higher by about $2.2 billion (page 6).
- An OIG consultant stated that establishing a 110% funding ratio target would be prudent for TVARS (page 10).
- Whereas TVA decided to reduce or skip contributions during 1990-2009 because of a period of excess asset returns, most pension plan sponsors viewed the excess returns as an offset for periods of negative asset returns (page 10).
- Details are provided regarding added liabilities/benefits and also enticements for retirement (page 10)

## J. Primary and Underlying Causes Have Not Been Adequately Dealt With

(1) At the end of FY 2015, the TVA SEC 10-K reflected pension obligations of $12.8 billion and assets of $6.8 billion, a hole that is now $6.0 billion deep. The funding ratio is worse than ever. Obviously, whatever has been tried during the past couple of decades to improve the TVA pension funding, including benefit cuts and other pension changes in 2009, has not been successful. That is clear evidence that the causes of the TVA pension underfunding have not been adequately dealt with.

(2) It seems clear from previous Sections E and I that the fundamental direct cause of the TVA pension system's current severe underfunded status is a long-term pattern (going back 20 or more years) of low or zero contributions by TVA to the pension. Seldom have the TVA contributions met the normal level needed for accruing benefits, much less been enough to alleviate an underfunded condition.

That pattern was interrupted by a large one-time TVA contribution in 2009, accompanied by benefit cuts mandated by TVA. That single large contribution proved to be inadequate, as have later contributions by TVA. Further proof is TVA's recent proposal to make substantial additional benefit reductions, with threat to terminate the pension if the TVA proposal were not accepted.

(3) As noted in Section E(8), this problem has persisted through many changes in key personnel involved. There must be some underlying cause(s) for such persistence.

Two such causes are discussed in Sections F(1) and F(2). There appears to be no TVA corporate goal related to the adequacy of TVA pension funding. Changes in retirement benefits of TVA executives and directors resulted in them having greatly reduced or zero personal stake in the adequacy of TVA pension funding.

(4) Sections B and G raise questions regarding whether TVA has adequately complied with provisions of the TVA Act regarding TVA pension funding, since compliance would seem to have improved funding of pension costs.

(5). As noted in Section E(8) and earlier in this section, both the direct cause and the underlying causes have persisted through many changes of organization structure and personnel. It seems obvious, then, that there must have been deficiencies in processes, policies, procedures, or lack thereof, which should determine the actions of CEOs and other executives, TVA directors, and TVARS directors.

(6) In summary, the single driving force leading to deterioration in plan funding was a continued disregard for actuarially driven funding as a basic discipline that should have been adhered to by both TVA and TVARS.

**K. Internal Breakdown Needs an External Fix**

Whatever policies and procedures TVA may have had in the past two decades for TVA pension system funding have proven to be inadequate.

TVA has demonstrated a sustained lack of internal discipline necessary to achieve and maintain adequate TVA pension system funding.

There has been no external force or mechanism in operation which would compel TVA to properly deal with pension system funding. Neither the TVA Act, Congressional influence, or specific laws and regulation (such as ERISA, PPA, and IRS 409A) have been applied to compel TVA action in this regard.

An external force, such as ERISA and PPA, is needed to compel TVA to take corrective action. If TVA had been subject to ERISA and PPA like its competitors are, TVA would have been required by law to take corrective action. TVA would have been required to implement a plan of increased funding to improve pension funding ratio within a reasonable number of years. Various penalties would have been imposed upon TVA and its executives until TVA pension funding was no longer deemed to be at risk.

**L. Recommendations**

The minimum required TVA pension system contribution required to comply with the Act, TVARS rules, and actuarial principles should be defined clearly. There should be no negotiated compromises.

Either the TVARS rules must be rewritten to assure that ERISA and PPA rules are adopted by TVARS with the force of law, or TVA must be placed under ERISA and PPA.

Placing TVA under ERISA and PPA is the most effective way to permanently remedy the TVA pension system problems. If that could be accomplished, then:

- It would impose effective corrective measures, under the force of law, regardless of changes in CEO, TVA directors, and TVARS directors.
- A low TVA pension system funding ratio (designated “at-risk”) would require TVA to begin a plan with increased yearly contributions to achieve a satisfactory funding ratio within a designated time period.
- Penalties would be imposed upon TVA and its executives for having an at-risk TVA pension system funding status.

## M. Figures and Tables

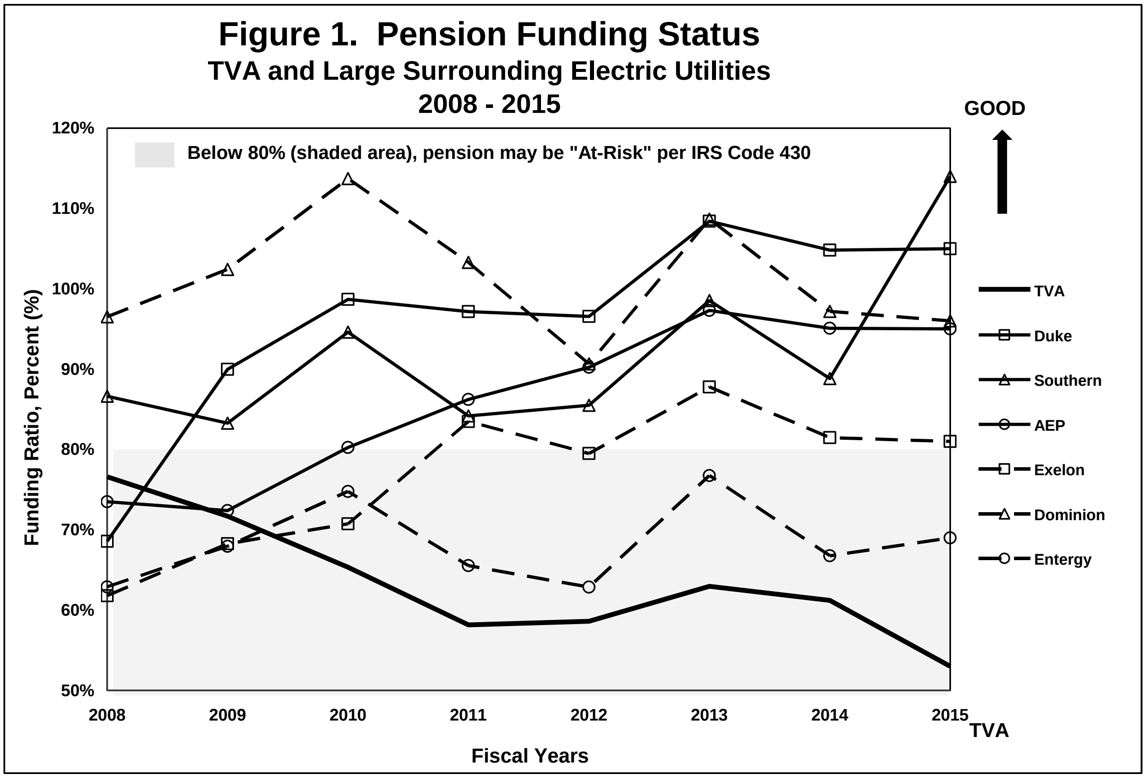


Figure 1 Sources: SEC Annual Report Form 10-k for each utility.
Note: TVA reports on a fiscal year basis ending September 30

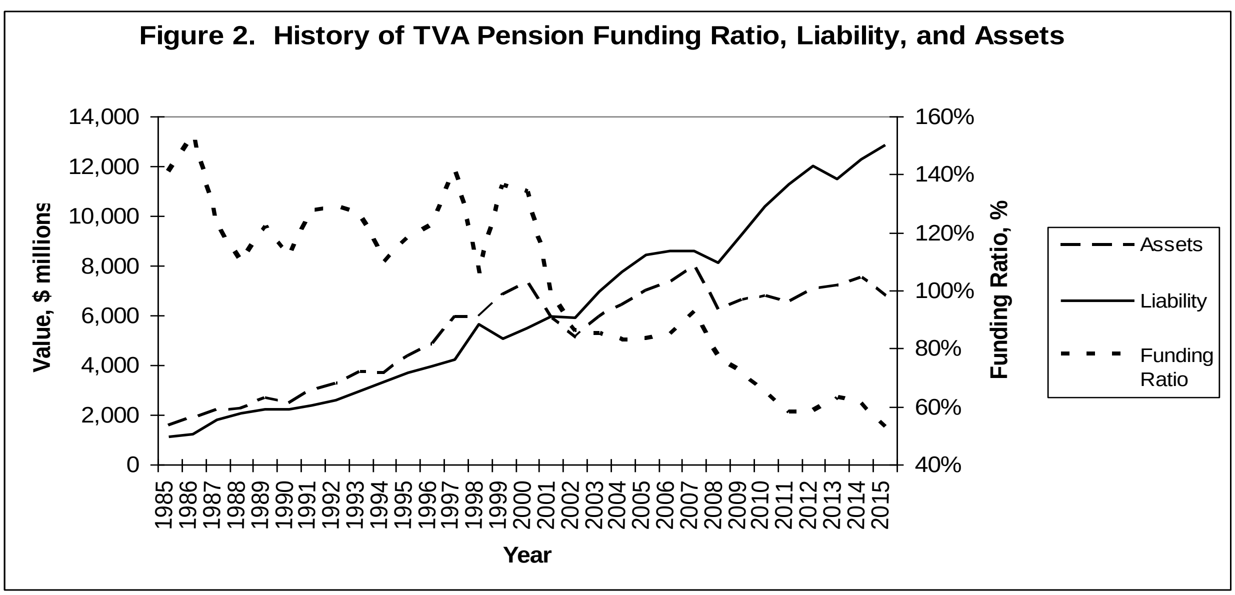


Figure 2 Sources: TVA Annual Reports (SEC 10-k and annual reports)

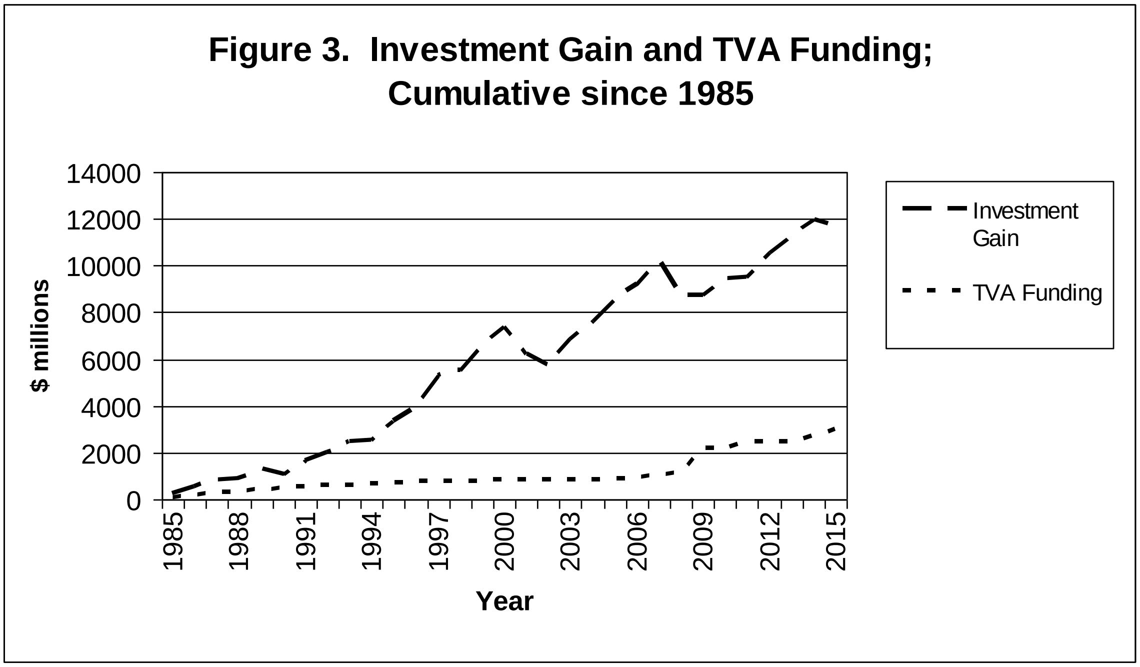


Figure 3 Sources: TVA Annual Reports (SEC10-k and annual reports) and (as necessary) TVARS annual reports

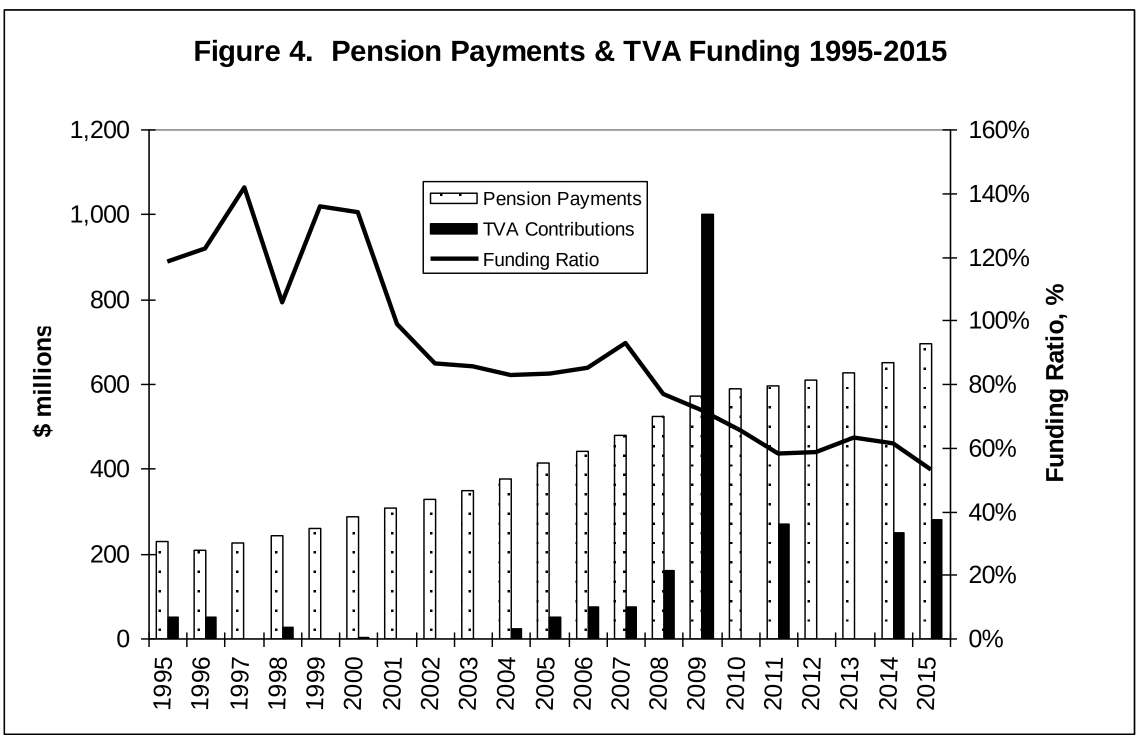


Figure 4 Sources: TVA Annual Reports (SEC10-k and annual reports)

Table 1. TVA Pension Funding 2002 - 2015

| Fiscal Year | $ Pension Costs Collected from Ratepayers | $Transferred To Pension Fund | $Difference | |
|---|---|---|---|---|
| 2002 | $-40,000,000 | $0 | $-40,000,000 | |
| 2003 | $41,000,000 | $0 | $41,000,000 | |
| 2004 | $178,000,000 | $23,000,000 | $155,000,000 | |
| 2005 | $243,000,000 | $53,000,000 | $190,000,000 | |
| 2006 | $244,000,000 | $75,000,000 | $169,000,000 | |
| 2007 | $164,000,000 | $78,000,000 | $86,000,000 | |
| 2008 | $102,000,000 | $165,000,000 | $-63,000,000 | |
| 2009 | $91,000,000 | $1,005,000,000 | $-914,000,000 | |
| 2010 | $292,000,000 | $6,000,000 | $286,000,000 | |
| 2011 | $404,000,000 | $274,000,000 | $130,000,000 | |
| 2012 | $530,000,000 | $8,000,000 | $522,000,000 | |
| 2013 | $549,000,000 | $6,000,000 | $543,000,000 | |
| 2014 | $517,000,000 | $256,000,000 | $261,000,000 | |
| 2015 | $283,000,000 | $283,000,000 | $0 | |
| **TOTAL** | **$3.598 Billion** | **$2.232 Billion** | **$1.366 Billion** | |
| | | | | |

**Source:** The information in Table 1 was obtained from annual reports TVA filed with the U.S. Securities & Exchange Commission and from TVA's response to a Freedom of Information Act (FOIA) request.

**N. References**


1. Tennessee Valley Authority (TVA) Act of 1933 ("the Act").

2. Page 28 of memorandum accompanying August 19, 2015 order by Judge Aleta A. Trauger, No. 3:10-cv-217. http://www.tvars.com/pdf/08-19-2015_memorandum.pdf

3. TVA falls through cracks as plan funding deteriorates, Pensions & Investments Magazine, May 26, 2014. http://www.pionline.com/article/20140526/PRINT/305269990/tva-falls-through-cracks-as-plan-funding-deteriorates

4. TVA Annual Reports, 1985-2015. Reports for 2006-2015 are available as Annual Reports on Form SEC 10-k at http://www.snl.com/IRW/FinancialDocs/4063363.

5. TVARS Annual Reports, 1985-2014. Reports for 2001-2014 can be found by searching http://www.tvars.com/ .

6. April 1999 GAO report, Tennessee Valley Authority, Assessment of the 10-year Business Plan, Page 20. http://www.gao.gov/assets/230/227288.pdf

7. Final Report – Audit 2009-12326 -- Review of TVA's Pension Risk, February 12, 2010. http://oig.tva.gov/reports/PDF/10rpts/2009-12326-1.pdf

8. Letter from International Federation of Professional & Technical Engineers to Tennessee Valley Authority Area Lawmakers, April 6, 2016.

9. Rules and Regulations of the TVA Retirement System.
http://tvars.com/pdf/tvars_rules_regs.pdf

**O. Appendix 1**

# TVA Act Applied to Pension Funding

The Tennessee Valley Authority (TVA) Act of 1933 is comprehensive legislation passed by Congress that establishes the broad power, authority, and responsibilities of the agency. Section 15 of the Act addresses TVA's rates, payment of costs, and payments on TVA's bonds. In this section, Congress established legal mandates for TVA to annually (1) charge rates high enough to cover all its costs, and (2) give priority to payment of its operating, maintenance, and administrative costs over bond payments.

Considering that these mandates require TVA to always charge enough to cover all its costs and that all those costs must be paid, it seems improbable that TVA's pension could ever find itself in a seriously underfunded status. However, it is possible that TVA may have failed to meet the requirements of Section 15 and that those failures may have contributed significantly to the current underfunded status of the TVA pension.

Specifically, Section15 d (f) on page 24 of the Act states:

**"The Corporation shall charge rates for power which will produce gross revenues to provide funds for operation, maintenance, and administration of its power system…"**

It is clear from this wording that Congress intended for to TVA charge rates that would produce sufficient funds to satisfy its all is costs. Since pension costs are part of administrative costs, pension costs must also be covered by the rates.

Section 15 d (f) goes on to say that rates should also produce enough funds to cover payments of tax equivalents to states and counties, and that funds from additional margins could then be used to make payments on bonds and additions to power system assets.

The 15 d (f) mandate is referred to in TVA's 10-K report to the Securities & Exchange Commission (SEC) as the "rate test". Following is an excerpt from TVA's FY 2015 SEC 10-K report (page 57) that addresses the rate test:

**"The rate test for the one year period ended September 30, 2015 was calculated after the end of the 2015 and TVA met the test requirements…"**

It appears TVA is required to meet the rate test each and every year, and there is no "carry-over" of profits to offset losses from one year to the next. Each year that TVA passes the rate test means that TVA collected enough funds from ratepayers to cover **ALL** its costs, including pension costs. It appears that TVA passed the rate test each and every year since at least 2002.

Some argue that the Act requires TVA to collect enough funds to cover all its costs, but that once TVA takes possession of those funds, that TVA can use the funds for any purpose. However, no language was found in the Act to support this argument. In fact, the Act seems to go to extremes to emphasize the proper use of ratepayer funds by establishing an order, or priority, that must be followed in use of the funds. This order is found in Section 15 d (a) which mandates that TVA's operating, maintenance, and administrative costs have priority over TVA's bond payments. This section states on page 21 of the Act that:

**"The principal of and interest on said bonds shall be payable solely from the Corporation's net power proceeds as hereinafter defined. Net power proceeds are defined for purposes of this section as the remainder of the Corporations' gross power revenues after deducting the costs of operating, maintaining, and administering its power properties**."

Note that the costs used in calculation of net power proceeds (NPP) are the same as the costs used in the rate test, except depreciation costs are excluded from determination of NPP.

Clearly, the priority of payment mandate is established within the definition and calculation of NPP. The requirement is that any funds left over **AFTER** paying the operating, maintenance, and administrative costs can be used for bond payments. Note that pension costs are part of administrative costs and must be paid, just like all the other costs, before bond payments.

Some argue that TVA pension costs for purposes of the NPP calculation are equal to TVA pension contributions, not TVA pension costs collected from ratepayers and used in the calculation of the rate test. However, there is no language in the Act to support this. In fact, it appears Congress clarified that costs used in calculation of the rate test should also be used in calculation of NPP except for depreciation costs, which are not included in calculation of NPP. If Congress intended a different amount of pension costs were to be used, Congress would have spelled that out, just as it excluded depreciation costs.

TVA, in its FY 2015 SEC 10-K, acknowledges this priority and actually seems to go to extremes to emphasize it. The following statement is on page 101 of the FY 2015 SEC 10-K:

**"Costs of operating, maintaining, and administering TVA's power properties have priority over TVA's payments on the bonds."**

Fundamentally, these mandates simply say that TVA must design its rates to cover all its costs, and that it should then use the resulting funds collected from its ratepayers to pay those costs. Then, if any funds are left over, those funds can be used to make payments on the bonds.

To determine if TVA adhered to these legal mandates, a review was conducted of TVA's financial statements to determine the amount of pension costs that TVA charged to and collected from its ratepayers. The funds collected from ratepayers for pension costs were then compared to the amounts TVA applied in satisfaction of its pension costs, year by year, from 2002 through 2015. Table 1 shows that TVA, over the 14 years, collected $3.598 billion from its ratepayers to specifically cover pension costs, but used only $2.232 billion of those funds to cover pension costs. It is not clear how TVA used the remaining $1.366 billion, but it is possible those funds were used for TVA's capital costs and to avoid additional long term debt.

As shown in Table 1, it appears that TVA did not always use the funds collected from its ratepayers for their intended purpose. However, in 2015, TVA adopted a new policy that appears to address this very issue. On page 98 of the FY 2014 SEC 10-K, TVA stated that:

"**In 2015, TVA will begin including its cash contributions to the pension plan in the rate-making formula; accordingly, beginning October 1, 2014, TVA will recognize pension costs as regulatory assets to the extent that the amount calculated under GAAP as pension expense differs from the amount TVA contributes to the pension plan**."

This new policy appears to bring TVA into compliance with 15 d (a) and 15 d (f) of the Act for FY 2015 and future years. In fact, note that the table shows that TVA in FY 2015 collected $283,000,000 from ratepayers to cover pension expenses and that TVA paid $283,000,000 to the pension. Although this new policy should ensure that TVA is in compliance with Section 15 mandates for FY 2015 and future years, it does not address years prior to FY 2015.

It is recognized that TVA and TVARS negotiated different payment amounts for different years, depending on TVA's and TVARS's needs. These negotiated agreements make it difficult to clearly determine if TVA violated the mandates of Section 15. However, in FY 2014, it seems pretty clear that TVA did not give priority to $261,000,000 of pension costs over bond payments in that year. As mentioned above, agreements (TVARS rules) between TVA and TVARS cloud this assessment for prior years. However, many argue that TVARS rules are subordinate to laws established under the Act, and where there are conflicts between the Act and TVARS rules, the Act prevails.