MINUTES OF MEETING

OF THE BOARD OF DIRECTORS

RETIREMENT SYSTEM OF THE TENNESSEE VALLEY AUTHORITY

June 16, 2016

[Edited to remove personal information of members and retirees and proprietary or other confidential information pursuant to TVARS Confidentiality Policy]

The regular quarterly meeting of the Board of Directors (Board) of the TVA Retirement System (System) was held on Thursday, June 16, 2016, at 3:25 p.m., EDT, at the TVA Knoxville Office Complex, WT 2-180, Knoxville, Tennessee.

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The following directors were present: Allen E. Stokes, Chair; Brian M. Child; John M. Hoskins; James W. Hovious; Leonard J. Muzyn; and Tammy W. Wilson. Anthony L. Troyani, Vice Chair, was not present. Also present were Patrick D. Brackett, Executive Secretary; William B. Jenkins, Jr., Manager, Retirement Applications; Sally R. Weber, Manager, Retirement Operations; Veenita Bisaria, Manager, Investment & Risk Management; Chris A. Stinnett, Sr. Analyst, Investment & Risk Management; Michael B. Barnes, Analyst, Investment & Risk Management; and Vincent V. Sands, Board Adviser.

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463-1 Each director was notified in a memorandum dated May 24, 2016, of the regular quarterly meeting to be held on June 16, 2016. A copy of the notice from the Executive Secretary is filed as Exhibit 463-1.

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463-2 (A-6329). There were no items to report from the Chair.

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463-3 (A-6330). The Executive Secretary's report included the following:

- The Executive Secretary informed the Board that the 401(k) Plan has been selected for the 2016 Best in Class award by PLANSPONSOR magazine.
- The Executive Secretary notified the Board that the September quarterly meeting will be just one day on September 8. This meeting will include the Board and Executive Secretary evaluations with Jeanna Cullins of Aon Hewitt Investment Consulting.
- The Executive Secretary informed the Board that, as directed by the Board pursuant to its approval of plan changes at its May 9, 2016, special-called meeting, the System staff has drafted amendments to the System Rules and Regulations and 401(k) Plan Provisions implementing the changes, which are currently being reviewed by Mercer Human Resources Consulting (Mercer), the System's actuary, and Bradley Arant Boult Cummings (Bradley), the Board's outside counsel. Once any changes based on comments from Mercer and Bradley are incorporated, a copy of the draft amendments will be provided to the Board for its review and comments.

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463-4 (A-6331). Following the Board meeting, Chris Christie of Bradley, outside legal counsel representing the System in the current lawsuit against TVA and the System, updated the Board on the current status of and issues in the lawsuit, including recent oral arguments before the Sixth Circuit Court of Appeals.

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463-5 (A-6332). The Board noted its previous notational action accepting the Report of Actuary on the Seventy-Sixth Actuarial Valuation of the TVA Retirement System prepared by Mercer as of September 30, 2015. A copy of a letter from Réal Lamarche, Partner, Mercer, to the Board, and a copy of the System's Actuarial Valuation, are filed as Exhibit 463-5.

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463-6 (A-6333). The Board noted its previous notational action approving the 1-year renewal of the System's fiduciary liability insurance policy for the Board and System staff from

AIG with \$10 million in coverage, subject to a \$500,000 deductible, with no prior acts exclusions. A copy of the insurance policy renewal quote from AIG and the insurance policy is filed as Exhibit 463-6.

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463-7 (A-6334). The Board approved the minutes of Special-Called Meeting No. 460 held March 3, 2016.

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463-8 (A-6335). The Board approved the minutes of Meeting No. 461 held March 3, 2016.

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463-9 (A-6336). The Board approved the minutes of Special-Called Meeting No. 462 held May 9, 2016.

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463-10 (A-6337). The Board accepted the Treasurer's Report for the quarter ended March 31, 2016. A copy of the Treasurer's Report is filed as Exhibit 463-10.

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463-11 (A-6338). The Board accepted the Investment Performance Report prepared by Wilshire Associates Incorporated (Wilshire) for the quarter ended March 31, 2016. A copy of the Investment Performance Report is filed as Exhibit 463-11.

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463-12 (A-6339). The Board accepted the report of retirements approved for the quarter ended March 31, 2016. A copy of the report with summary demographic information regarding retirements in the quarter is filed as Exhibit 463-12.

463-13 (A-6340). The Board accepted the quarterly review for the 401(k) Plan prepared

by Fidelity Investment Institutional Services Company (Fidelity) for the quarter ended March 31,

2016. A copy of the 401(k) Plan quarterly review is filed as Exhibit 463-13.

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463-14 (A-6341). The Investment Committee report consisted of the items reported

below at A-6342, A-6343, A-6344, A-6345, A-6346, A-6347 and A-6348, and of the following

items:

- The Board was provided and took note of the quarterly report on manager compliance with investment guidelines. A copy of the report, dated March 31, 2016, is filed as Exhibit 463-14(a).
- The Board was provided and took note of information regarding investment manager asset transfers during the first quarter of 2016. A copy of this information is filed as Exhibit 463-14(b).
- The Board was provided and took note of information on due diligence meetings and conference calls between System staff and investment managers and service providers for the period March 2016 through April 2016. A copy of the information is filed as Exhibit 463-14(c).
- The Board was provided an update on the funded status of the System through March 31, 2016. A copy of the report is filed as Exhibit 463-14(d).
- The Board reviewed and discussed the quarterly 401(k) Plan Discussion Guide from Aon Hewitt Investment Consulting (AHIC) covering the following: update on transition to new 401(k) Plan investment lineup, market information, performance of the investment funds in the 401(k) Plan's lineup, manager updates, and fee analysis. A copy of the AHIC 401(k) Plan Discussion Guide is filed as Exhibit 463-14(e).
- The Board was provided an update on Wilshire's 10-year forward-looking capital market assumptions for asset classes. A copy of this information from Wilshire is filed as Exhibit 463-14(f).
- The Board was provided and discussed with Wilshire and System investment staff information on the following System portfolios: Diversified Alpha Strategy (DAS), an international equity portfolio managed by Wellington Management Company; absolute return fixed income portfolio managed by Western Asset Management

Company (WAMCO); and high yield fixed income portfolio managed by Oaktree Capital Management. A copy of this information is filed as Exhibit 463-14(g).

- Wilshire provided education to the Board on institutional private credit strategies and will work with the System investment staff to develop potential opportunities for the System. A copy of Wilshire's private credit presentation is filed as Exhibit 463-14(h).
- The Board previously approved amending the System's asset allocation policy to create a public real assets allocation, and within this allocation, a 15% allocation to global real estate investment trusts ("global REITs"). The Board was provided information on the manager search work to be performed by Wilshire and the System investment staff for global REIT managers. A copy of this information is filed as Exhibit 463-14(i).
- The Board was provided information on the manager search work to be performed by Wilshire and the System investment staff for non-U.S. equity small cap managers. A copy of this information is filed as Exhibit 463-14(j).
- The Board was provided information on work to be performed by Wilshire and System investment staff evaluating the interaction of the various allocations assigned to all of the System's managers within the System's asset allocation policy. A copy of this manager allocation information is filed as Exhibit 463-14(k).
- The Board was provided with an update on the Request for Proposal for TVARS's master trustee and custodian, which the Board discussed with the TVARS staff. A copy of the master trustee/custodian RFP update is filed as Exhibit 463-14(1).

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463-15 (A-6342). As a part of Wilshire's fixed income portfolio analysis, the Board is in the process of bucketing fixed income assets into core and opportunistic mandates. The Board was provided information on Wilshire's analysis of the fixed income portfolios managed by Guggenheim Partners Asset Management ("Guggenheim") and Prudential Investment Management ("Prudential"). After discussion, and upon the recommendation of Wilshire and the Investment Committee, the Board approved the following: (i) converting Guggenheim's blended benchmark to 100% Barclays U.S. Aggregate Index, and (ii) converting Prudential's current corporate bond strategy to a core bond strategy. A copy of a memo from Wilshire to the Board on this fixed income analysis and changes is filed as Exhibit 463-15.

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463-16 (A-6343). Under the System's current asset allocation policy, ten percent (10%) of the System's assets are allocated to private real assets, of which private real estate is targeted at 7% and other real assets at 3%. Wilshire discussed with the Board upcoming distributions from current private real estate investments and future commitments to new private real estate funds. Following the discussion, and upon the recommendation of Wilshire and the Investment Committee, the Board approved committing \$20 million to Franklin Templeton's second value added real estate fund, the Franklin Templeton Private Real Estate Fund II. A copy of a memo from Wilshire to the Board on this private real estate investment is filed as Exhibit 463-16.

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463-17 (A-6344). After discussion, and upon the recommendation of Wilshire and the Investment Committee, the Board approved, as a limited partner in the Abbott Capital Private Equity Fund IV, a 2-year extension of the Fund beyond the initial partnership term and extensions through June 30, 2018. A copy of the term extension request from the Fund's general partner, along with the terms of the extension, is filed as Exhibit 463-17.

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463-18 (A-6345). After discussion, and upon the recommendation of Wilshire and the Investment Committee, the Board approved the transition to a new investment vehicle for the System's treasury inflation protected securities ("TIPS") portfolio with Bridgewater Associates. A copy of transition information for the Bridgewater portfolio is filed as Exhibit 463-18.

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463-19 (A-6346). As a part of its private real assets allocation, the System currently has a private real estate investment as a limited partner in the Kennedy Wilson Real Estate Fund IV,

L.P. (the "KW Fund") and serves as an advisory board member of the KW Fund. The KW Fund currently owns a 50% interest in Capitol Towers, an apartment property in Sacramento, California ("Capitol Towers") and a 48.8% interest in University Crossing, a retail center in Orem, Utah ("University Crossing"). The general partner of the KW Fund has informed the KW Fund limited partners, including the System, of a proposal to sell the KW Fund's ownership interests in Capital Towers and University Crossing to K-W Properties, requested approval from the advisory board members of the sale because K-W Properties is an affiliate of the general partner and KW Fund's investment adviser, and provided the limited partners information on the proposal, including market valuation and investment return. After consideration of the proposal information, and following a discussion with Wilshire on the efficacy of the transaction, the Board voted to approve the sale of the KW Fund's interests in Capital Towers and University Crossing to K-W Properties and delegated to the Executive Secretary the authority to sign the advisory board member written consent and related-party waiver as a part of the transaction. A copy of the proposal information from KW Fund general partner, a Wilshire memo to the System on the proposal, and the advisory board member written consent and waiver is filed as Exhibit 463-19.

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463-20 (A-6347). Over the past year, the Board and Wilshire have discussed the potential to restart the securities lending program within the System's trustee/custodial relationship. After discussion, and upon the recommendation of Wilshire and the Investment Committee, the Board approved restarting the securities lending program with the System's trustee, Bank of New York Mellon, structured with clearly defined guidelines, enhanced quality controls, and higher levels of indemnification, and delegated to the Executive Secretary the authority to enter into any agreements with BNY Mellon to restart the securities lending program on terms acceptable to the Board. A copy of a memo from Wilshire on the securities lending and information from BNY Mellon on its proposed securities lending program with the System is filed as Exhibit 463-20.

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463-21 (A-6348). The Board previously approved amending the System's asset allocation policy to create a public real assets allocation with a policy weight of 15% of the System's total portfolio with the allocation of individual assets within the public real assets bucket to be strategically managed (see Minute Entry 461-13). The initial allocations within the public real assets bucket, based on an equal risk-balanced approach, will be structured with the following weights: 50% TIPS, 20% commodities, 15% global REITs, and 15% MLPs. After discussion, and upon the recommendation of Wilshire and the Investment Committee, the Board approved an implementation plan for transitioning assets within and into the public real assets bucket according the approved policy allocations within the bucket. A copy of information from Wilshire to the Board on this implementation plan is filed as Exhibit 463-21.

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463-22 (A-6349). The Retirement Committee report consisted of items reported below at A-6350, A-6351, A-6352, A-6353 and A-6354, and of the following item:

• The Board was provided with summary information on the disability retirement application of [*redacted*], a former TVA employee who applied for a disability retirement in 1992, who later filed an appeal in 1999, which the Board considered and denied, and who continues to request reconsideration through TVA and System Board members. A copy of this summary memo is filed as Exhibit 463-22.

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463-23 (A-6350). Upon the recommendation of the Retirement Committee, the Board accepted the actuarial valuation of the Variable Annuity Fund as of September 30, 2015, by Mercer, and its recommendation that the outstanding variable units should be increased by 156,358. The increase in number of units will result in a decrease in the unit value and will be applied beginning with the July 2016 payroll. A copy of Mercer's TVA Retirement System Variable Annuity Valuation Report as of September 30, 2015, is filed as Exhibit 463-23.

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463-24 (A-6351). The Board voted to (i) remove Pamela K. Ramsey as Assistant Secretary and an Assistant Treasurer given her retirement from TVA, (ii) appoint William B. Jenkins, Jr. as Assistant Secretary, (iii) appoint Patrick B. Vananda as an Assistant Treasurer, and (iv) adopt the following resolutions to affirm officer appointments, to authorize the officers to conduct certain transactions required in the operation and administration of the Fixed Benefit Fund, Variable Fund, and the 401(k) Plan, and to authorize the officers to sign checks on behalf of the System:

Operation and Administration of the Fixed Benefit Fund and Variable Fund:

WHEREAS the operation and administration of the Fixed Benefit Fund and Variable Fund require execution of various forms and documents on behalf of the Board of Directors of the System;

BE IT RESOLVED, That the Board hereby affirms the appointment of each of the below named officers of the System and authorizes each of them to approve, sign, attest, or authenticate on behalf of the Board any form or document required in the operation and administration of the Fixed Benefit Fund and Variable Fund. Such authority shall include but not be limited to (1) transfer of monies between The Bank of New York Mellon, Pittsburgh, Pennsylvania, and First Tennessee Bank, N.A., (2) transfer of monies between investment managers, and (3) approval of withdrawals from the fixed and variable funds.

Patrick Brackett, Executive Secretary William B. Jenkins, Jr., Assistant Secretary Sally R. Weber, Treasurer W. Colby Carter, Assistant Treasurer Courtney L. Hammontree, Assistant Treasurer T. Justin Vineyard, Assistant Treasurer Patrick B. Vananda, Assistant Treasurer

RESOLVED further, That this resolution shall become effective June 16, 2016, and shall supersede and rescind any previous resolutions adopted by the Board to the extent inconsistent with this resolution.

Operation and Administration of the 401(k) Plan:

WHEREAS the operation and administration of the TVA Savings and Deferral Retirement Plan require execution of various forms and documents on behalf of the Board of Directors of the System;

BE IT RESOLVED, That the Board hereby affirms the appointment of each of the below named officers of the System and authorizes each of them to approve, sign, attest, or authenticate on behalf of the Board any form or document required in the operation and administration of the TVA Savings and Deferral Retirement Plan. Such authority shall include but not be limited to (1) Letters of Intention and Price Agreement as required for the investment of the funds of the TVA Savings and Deferral Retirement Plan in the Plan's eligible investment funds, and (2) orders for the purchase, sale, transfer, assignment, investment in, or withdrawal from such Plan or funds.

Patrick Brackett, Executive Secretary William B. Jenkins, Jr., Assistant Secretary Sally R. Weber, Treasurer W. Colby Carter, Assistant Treasurer Courtney L. Hammontree, Assistant Treasurer T. Justin Vineyard, Assistant Treasurer Patrick B. Vananda, Assistant Treasurer

RESOLVED further, That this resolution shall become effective June 16, 2016, and shall supersede and rescind any previous resolutions adopted by the Board to the extent inconsistent with this resolution.

Authority to sign checks on behalf of the System:

WHEREAS in accordance with section 8 of Article I of the System's bylaws, the Treasurer may delegate to Assistant Treasurers such duties as the Treasurer deems appropriate, except that the authority to sign checks on behalf of the System shall be delegated only with the Board's approval; and

WHEREAS the Treasurer has delegated some duties to four Assistant Treasurers;

BE IT RESOLVED That the Board hereby affirms the appointment of each of the following officers of the System and authorizes them, as long as they hold the office

listed below, to sign on behalf of the System, checks drawn on any of the various bank accounts maintained by the System.

Sally R. Weber, Treasurer W. Colby Carter, Assistant Treasurer Courtney L. Hammontree, Assistant Treasurer T. Justin Vineyard, Assistant Treasurer Patrick B. Vananda, Assistant Treasurer

RESOLVED further, That this resolution shall become effective June 16, 2016, and shall supersede and rescind any previous resolutions adopted by the Board to the extent inconsistent with this resolution.

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463-25 (A-6352). Pursuant to Section 6C1 of the System's Rules and Regulations, the Board considered the disability retirement application of [*redacted*], a current TVA employee. After review and discussion of the medical evaluation, human resources information, and an independent medical review, the Board disapproved [*redacted*]'s disability retirement application. A copy of the disability retirement application materials is filed as Exhibit 463-25.

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463-26 (A-6353). Pursuant to Section 6C1 of the System's Rules and Regulations, the Board considered the disability retirement application of [*redacted*], a current TVA employee. After review and discussion of the medical evaluation, human resources information, and an independent medical review, given the fact that there is medical information referencing a temporary nature to [*redacted*]'s conditions, the Board decided to postpone a determination on his disability retirement application until he is reevaluated in several months. A copy of the disability retirement application materials is filed as Exhibit 463-26.

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463-27 (A-6354). Upon the recommendation of the Retirement Committee, the Board approved a Statement of Work with Aon Hewitt, the System's cash balance recordkeeper, to do

the following: (i) perform the work and coding changes necessary to recordkeep the future cash balance accruals and interest pursuant to the System Board's approval of plan changes at its May 9, 2016, special-called meeting, and (ii) provide enhance cash balance pension estimate tools for participants. A copy of Aon Hewitt's Statement of Work is filed as Exhibit 463-27.

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463-28 (A-6355). The Election Committee report consisted of the item reported below at

A-6356, and of the following item:

The System Board previously approved an extension of its contract with VR Election Services to provide election services for the System (see Minute Entry 461-20). Following this approval, the System was informed that VR Election Services closed as a business. After discussion of alternatives with the System staff, upon the recommendation of the Election Committee, the Board voted to terminate its contract with VR Election Services, approve a 1year election services contract with Everyone Counts, and delegate to the Executive Secretary the authority to take any actions necessary to implement this action. A copy of the election services information and proposal from Everyone Counts is filed as Exhibit 463-28.

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463-29 (A-6356). Upon the recommendation of the Election Committee, the Board

approved the 2016 TVARS Election Schedule. A copy of the Election Schedule, nominating

petition, and candidate information form is filed as Exhibit 463-29.

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463-30 (A-6357). The Audit Committee report consisted of the items reported below at

A-6358 and A-6359, and of the following items:

- The Board was provided and took note of the System Board's travel expenses for the previous quarter.
- The Board was provided and took note of a summary of charges on the System's credit card for the previous quarter.

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463-31 (A-6358). Upon the recommendation of the Audit Committee, the Board voted to approve, and authorized the Executive Secretary to execute, an engagement letter with Crowe Horwath to perform the fiscal year 2016 financial statement audits of the System and the 401(k) Plan. A copy of the engagement letter between Crowe Horwath and the System is filed as Exhibit 463-31.

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463-32 (A-6359). In April 2016, Pamela K. Ramsey retired from TVA leaving a vacancy in the position of Assistant Secretary. Following consideration of potential replacement candidates, the Board approved the appointment of William B. (Bill) Jenkins, Jr., Manager, Retirement Applications, as Assistant Secretary.

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The meeting was adjourned at 3:45 p.m., EDT.

Inthe Rest Att Executive Secretary

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Chair