MINUTES OF MEETING

OF THE BOARD OF DIRECTORS

RETIREMENT SYSTEM OF THE TENNESSEE VALLEY AUTHORITY

September 8, 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, September 8, 2016, at 1:15 p.m., EDT, at the TVA

Chattanooga Office Complex, MRC 1S 419, Chattanooga, Tennessee.

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The following directors were present: Allen E. Stokes, Chair; Anthony L. Troyani, Vice Chair; Brian M. Child; John M. Hoskins; James W. Hovious; Leonard J. Muzyn; and Tammy W. Wilson. Also present were Patrick D. Brackett, Executive Secretary; William B. Jenkins, Jr., Assistant Secretary; Sally R. Weber, Manager, Retirement Operations; Veenita Bisaria, Manager, Investment & Risk Management; Chris A. Stinnett, Sr. Analyst, Investment & Risk Management; W. Colby Carter, Senior Counsel, Retirement Benefits & Compliance; and Jeanna Cullins, Partner, Aon Hewitt, Fiduciary and Governance Consultant.

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465-1 Each director was notified in an e-mail dated August 19, 2016, of the regular quarterly meeting to be held on September 8, 2016. A copy of the notice from the Executive Secretary is filed as Exhibit 465-1.

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465-2 (A-6360). There were no items to report from the Chair.

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465-3 (A-6361). The Executive Secretary's report included the following:

- The Executive Secretary provided to the Board the proposed budget for the System for fiscal year 2017.
- The Executive Secretary notified the Board that the December quarterly meeting will be just one day on December 8 in Chattanooga.
- The Executive Secretary noted that, following the meeting, the Board will meet with Jeanna Cullins of Aon Hewitt, the Board's fiduciary and governance consultant. During this meeting, the Board will perform will perform the Board Self Evaluation and Executive Secretary Evaluation in conformance with the Board's governance policies.
- The Executive Secretary informed the Board that amendments to the System Rules and Regulations and 401(k) Plan Provisions approved by the Board at its August 8, 2016, special-called meeting, go into effect at the end of the day, which is 30 days following the presentation of the amendments to TVA for review and during which time TVA did not veto the amendments.
- On behalf of the Board, the Executive Secretary recognized John Hoskins for his 13 years of service as a director on the Board. Director Hoskins will be retiring from TVA at the end of September and will no longer serve as a director on the Board following that date.

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465-4 (A-6362). Senior Counsel informed the Board that the TVA Board of Directors,

within its approval of TVA's budget for fiscal year 2017, approved a contribution of \$300

million to the System for fiscal year 2017.

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465-5 (A-6363). The Board approved the minutes of Meeting No. 463 held June 16,

2016, by a vote of 6 to 0 with Director Troyani abstaining.

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465-6 (A-6364). The Board approved the minutes of Special-Called Meeting No. 464 held August 8, 2016.

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465-7 (A-6365). The Board accepted the Treasurer's Report for the quarter ended June30, 2016. A copy of the Treasurer's Report is filed as Exhibit 465-7.

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465-8 (A-6366). The Board accepted the Investment Performance Report prepared by Wilshire Associates Incorporated (Wilshire) for the quarter ended June 30, 2016. A copy of the Investment Performance Report is filed as Exhibit 465-8.

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465-9 (A-6367). The Board accepted the report of retirements approved for the quarter ended June 30, 2016. A copy of the report is filed as Exhibit 465-9.

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465-10 (A-6368). The Board accepted the quarterly review for the 401(k) Plan prepared

by Fidelity Investment Institutional Services Company (Fidelity) for the quarter ended June 30,

2016. A copy of the 401(k) Plan quarterly review is filed as Exhibit 465-10.

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465-11 (A-6369). The Investment Committee report consisted of the items reported

below at A-6370, A-6371, A-6372, A-6373, and A-6374, 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 June 30, 2016, is filed as Exhibit 465-11(a).
- The Board was provided and took note of information regarding investment manager asset transfers during the second quarter of 2016. A copy of this information is filed as Exhibit 465-11(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 May 2016 through August 2016. A copy of the information is filed as Exhibit 465-11(c).
- The Board was provided an update on the funded status of the System through June 30, 2016. A copy of the report is filed as Exhibit 465-11(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 including fee analysis, market information, performance of the investment funds in the 401(k) Plan's lineup, manager updates, and overview of retirement income solutions for 401(k) plans. A copy of the AHIC 401(k) Plan Discussion Guide is filed as Exhibit 465-11(e).
- 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); high yield fixed income portfolio managed by Oaktree Capital Management; domestic small-cap equity portfolio managed by Neuberger Berman; and global TIPS portfolio managed by Bridgewater Associates. A copy of this Investment Manager Product Discussion List is filed as Exhibit 465-11(f).
- The Board was provided an initial search report by Wilshire for non-U.S. equity small cap managers. A copy of this search report is filed as Exhibit 465-11(g).
- The Board was provided a semi-annual report from Wilshire on the performance of the System's private markets portfolio (private equity, private real estate, and private real assets), which included net internal rate of return (net IRR) performance information for all of the funds in the portfolio compared to both vintage year IRRs for each fund and public market equivalent annualized performance. A copy of Wilshire's report dated March 31, 2016, is filed as Exhibit 465-11(h).
- The Board previously approved amending the System's asset allocation policy to create a public real assets bucket, and within this bucket, the following asset allocations: 50% allocation to Treasury Inflation Protection Securities ("TIPS"), 20% allocation to commodities; 15% allocation to global real estate investment trusts ("global REITs"), and 15% allocation to master limited partnerships ("MLPs"). The Board was provided information from Wilshire and the System staff on an implementation strategy to move to the various asset allocations for the public real assets bucket. A copy of this implementation information is filed as Exhibit 465-11(i).

465-12 (A-6370). On August 26, 2016, the Investment Committee met with HarbourVest Partners, which reviewed the overall strategic plan and provided an update on the 2016 and 2017 tactical plans for the System's private equity investments through the HarbourVest Summit Hill Fund. After discussion and review of HarvourVest's strategic and tactical plans, and upon the recommendation of the Investment Committee, the Board approved a commitment of \$300 million for the 2017 tranche investment in the HarbourVest Summit Hill Fund and authorized the Executive Secretary to take any actions necessary to implement this action. A copy of the HarbourVest presentation dated August 2016 is filed as Exhibit 465-12.

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465-13 (A-6371). As a part of portfolio simplification, the Investment Committee has been reviewing with Wilshire the Diversified Alpha Strategy (DAS) managed by Wellington Management Company and how it fits within the System's international equity portfolio. After discussion, upon the recommendation of Wilshire and the Investment Committee, the Board approved terminating the Wellington DAS, transferring those assets to a MSCI ACWI ex-U.S. passive index fund managed by Mellon Capital Management, and then investing those assets in a new non-U.S. international equity small cap mandate following a manager search in that area. A copy of the Wilshire memo to the Board on this action dated August 26, 2016, is filed as Exhibit 465-13.

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465-14 (A-6372). On August 26, 2016, the Investment Committee met with Wilshire to discuss the work on a revised asset allocation policy based on a bucketing approach that combines assets that play similar roles in the System's portfolio while allowing for more informed and strategic decisions regarding risk and diversification. Following discussion, and

upon the recommendation of Wilshire and the Investment Committee, the Board approved a revised asset allocation policy with the following asset class buckets with the indicated allocation percentages: public equity (39%), private equity (8%), safety oriented fixed income (15%), opportunistic fixed income (15%), public real assets (15%), and private real assets (8%). As a part of the approval, minimum and maximum allocation ranges were established for each asset class bucket. A copy of Wilshire's bucketing approach recommendation for asset allocation dated September 8, 2016, is filed as Exhibit 465-14.

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465-15 (A-6373). Following the review and evaluation of the Board's Request for Proposal for the System's master trustee and custodian, which included on-site visits and interviews, upon the recommendation of the Investment Committee, Executive Secretary, and System staff, the Board approved retaining Bank of New York Mellon as the System's master trustee and custodian and authorized the Executive Secretary to take any actions necessary to implement this action. A copy of the master trustee/custodian RFP evaluation and recommendation is filed as Exhibit 465-15.

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465-16 (A-6374). 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 III, L.P. (the "KW Fund") and serves as an advisory board member of the KW Fund. The KW Fund currently holds a 45% interest in KW Kona Investors, which owns the Kona Village Resort in Hawaii. 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 interest in KW Kona Investors to Kennedy Wilson, requested approval from the advisory board members of the sale because Kennedy Wilson 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 KW Kona Investors to Kennedy Wilson 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 the KW Fund general partner is filed as Exhibit 465-16.

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465-17 (A-6375). The Retirement Committee report consisted of items reported below at

A-6376, A-6377, A-6378, A-6379, and A-6380, and of the following items:

- The Board was previously 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 (see Minute Entry 463-21). The Executive Secretary provided to the Board [*redacted*]'s entire disability application record, which includes all information submitted by him related to his application as well as TVA Form 1444 dated 5-8-92 from his TVA personnel file. The Board determined there is no new medical information to support [*redacted*]'s request for reconsideration of his disability retirement application record provided by the Executive Secretary to the Board is filed as Exhibit 465-17(a).
- The Executive Secretary informed the Board that beginning in fiscal year 2017 TVA's contribution to the System will be made in twelve equal monthly installments during the fiscal year instead of semi-annually. A copy of a memo from the Executive Secretary to the Board on this change is filed as Exhibit 465-17(b).

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465-18 (A-6376). Upon the recommendation of the Retirement Committee, the Board

approved Mercer's Statement of Work to provide actuarial services to the System for fiscal year

2017, and delegated to the Executive Secretary the authority to take any actions necessary to effect that approval. A copy of Mercer's Statement of Work is filed as Exhibit 465-18.

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465-19 (A-6377). Prior to the meeting, the Board discussed with Mercer, the System's actuary, the actuarial assumptions to be used by Mercer in the valuation of the System's liability and benefit calculations as of September 30, 2016. Following the discussion, the Board delayed approval of the actuarial assumptions to a later meeting.

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465-20 (A-6378). Pursuant to Section 6C1 of the System's Rules and Regulations, the Board considered the disability retirement application of [*redacted*], a TVA employee currently on leave for injuries sustained in a motor vehicle accident while on duty. After review and discussion of the medical evaluation, human resources information, and an independent medical review, the Board approved by a 4 to 3 vote requesting [*redacted*] to undergo an additional independent medical review regarding his medical condition. Directors Child, Hoskins, Stokes and Wilson voted for making the request, and Directors Hovious, Muzyn and Troyani voted against making the request. A copy of the disability retirement application materials is filed as Exhibit 465-20.

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465-21 (A-6379). The Board previously reviewed the disability retirement application of [*redacted*], a current TVA employee, and decided to postpone a determination on his application until he was reevaluated by his physician (see Minute Entry 463-25). After review and discussion of the additional medical information submitted since the previous meeting, upon the recommendation of the Retirement Committee, the Board approved the disability retirement

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application of [*redacted*]. A copy of the disability retirement application materials is filed as Exhibit 465-21.

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465-22 (A-6380). As a part of the Board's approval of changes at its May 9, 2016, special-called meeting, the Board indicated its desire to pursue adopting additional amendments to the TVARS Rules and Regulations and 401(k) Plan Provisions that would offer employees who are continuing to accrue cash balance benefits the option to voluntarily elect to switch their future participation to the 401(k) Plan. Based on legal guidance, this type of voluntary election option is permitted by the IRS provided it is properly structured according to IRS rules. Senior Counsel presented to the Board a project scope and cost estimate for performing this cash balance election work along with Groom Law Group. Following discussion, and upon the recommendation of the Retirement Committee, the Board approved the cash balance election project work with Groom up to \$100,000. A copy of the memo from the Senior Counsel and Executive Director to the Board on the cash balance election project work and cost estimate is filed as Exhibit 465-22.

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465-23 (A-6381). The Election Committee provided the Board an update on the current Director election, which will end September 14, 2016.

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465-24 (A-6382). The Audit Committee report consisted 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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The meeting was adjourned at 1:37 p.m., EDT.

A.H. Z. XH Executive Secretary

Ila Stokes

Chair