

No. 19-03

Approved by the Board of Directors  
at its November 14, 2019, meeting:

Original Signed by Sherry A. Quirk  
Executive Vice President, General  
Counsel and Secretary

MINUTES OF MEETING  
OF  
THE BOARD OF DIRECTORS  
TENNESSEE VALLEY AUTHORITY  
August 22, 2019

A meeting of the Board of Directors of the Tennessee Valley Authority was held in the TVA West Tower Auditorium, 400 West Summit Hill Drive, Knoxville, Tennessee, on August 22, 2019. The meeting was called to order at 9:28 a.m. (EDT). The meeting agenda was announced to the public on August 15, 2019. The meeting was open to public observation.

Board members in attendance were: Director and Chair James (Skip) Thompson, and Directors Richard C. Howorth, Virginia Tyler (Gina) Lodge, Ronald A. Walter, Kenneth E. Allen, A.D. Frazier, Jeff W. Smith, John L. Ryder, and William (Bill) Kilbride.

Also present were TVA officers, including Jeffrey J. (Jeff) Lyash, President and Chief Executive Officer; Sherry A. Quirk, Executive Vice President, General Counsel and Secretary; John M. Thomas, Executive Vice President and Chief Financial Officer; Michael D. (Mike) Skaggs, Executive Vice President and Chief Operating Officer; Laura J. Campbell, Vice

President, Supply Chain; and Ashley Douglas (Doug) Perry, Vice President, Commercial Energy Solutions.

Chair Thompson presided over the meeting, which was duly called, notice to each Director having been delivered pursuant to section 1.2 of the Bylaws governing meetings of the Board of Directors of the Tennessee Valley Authority. A quorum was present.

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**19-03-1. Welcome**

Chair Thompson welcomed all in attendance, whether in person or via webcast, then recognized and received comments from Knox County, Tennessee, Mayor Glenn Jacobs. Following Mayor Jacobs' remarks Chair Thompson welcomed Jane Jolley, Community Engagement Director for Mayor Jacobs, and Zach Dooley, Senior Legislative Assistant to U.S. Representative Tim Burchett. Chair Thompson then briefly mentioned recent communications between TVA, Representative Burchett, and Representative Burchett's staff regarding transparency, and he noted that the Board believes transparency is a very important part of TVA's process. Chair Thompson expressed the Board's gratitude for time spent with Knoxville city officials, Knoxville Utilities Board (KUB) leaders, and other Knoxville partners on the evening prior to the meeting, and also thanked the members of the Tennessee Valley Industrial Committee (TVIC) for the time they spent with Board members on the morning of the meeting. At this point Chair Thompson welcomed the newest member of the Board, Director Bill Kilbride, after which he invited and received remarks from Director Kilbride. During his remarks Director Kilbride announced that, because of the complexity of the issues to be dealt

with and the fact that he was sworn in just two weeks prior to the date of the meeting, he would be recusing himself from voting on any of the items presented to the Board during the meeting. After noting the Board's respect for and understanding of Director Kilbride's decision to abstain from voting, Chair Thompson stated on behalf of the Board that it is an honor to serve the people of the Valley.

At this point Chair Thompson thanked Mayor Jacobs for taking the time to attend the meeting and expressed the Board's appreciation for its partnership with Knoxville and Knox County.

Chair Thompson next reported that the Board hosted a public listening session on the day before the meeting. He thanked those who spoke and provided a brief summary of the comments received by the Board during that listening session. Following Chair Thompson's summary, and in response to his invitation, Directors Lodge, Smith, and Howorth also provided brief remarks regarding the listening session. Following those remarks from other directors, Chair Thompson discussed opportunities for public involvement in TVA's decision-making process.

Chair Thompson mentioned the request made by the Board at its May 9, 2019, meeting for a study of TVA's transparency efforts to be conducted by President and Chief Executive Officer Jeff Lyash, stating it is critically important to the Board that TVA conduct its business in as open a manner as possible. Chair Thompson then requested and received a brief progress report on the transparency study from Mr. Lyash. In his report, Mr. Lyash described TVA's new "Get Involved, Stay Involved" web page, which: (i) provides information to the public on upcoming meetings; (ii) identifies projects currently open for public comment and other

opportunities to provide input to TVA; (iii) contains recent news releases; and (iv) describes how to contact TVA with questions.

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### **Old Business**

The Board approved the minutes of its May 9, 2019 meeting.

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### **New Business**

#### **19-03-2. President's Report**

President and Chief Executive Officer Jeffrey J. (Jeff) Lyash welcomed Chair Thompson to his new leadership position, and also welcomed Director Kilbride to the Board. He then thanked Knox County Mayor Jacobs and Knoxville Utilities Board for their engagement as well as their support of the Board during the week leading up to the meeting.

Mr. Lyash reported that he has spent most of the 135 days since beginning in his new position listening and learning during interactions with elected officials, community leaders, and citizens. He made specific reference to meeting with Ms. Hazel Benton following completion of the 250<sup>th</sup> Home Uplift project at her residence in Chattanooga, and of learning about the positive impact the project has had on Ms. Benton's health, well-being, and family. He then briefly discussed the importance of TVA's focus on energy efficiency programs for the most challenged members of the Valley community and after that spoke specifically on some of the things he has learned since coming to TVA. Mr. Lyash stated that TVA's mission is to make the lives of the

people of the Valley better through a focus on energy, environment, and economic development, and the mission is as compelling today as it has always been. Mr. Lyash next discussed his impressions regarding TVA's workforce, current issues facing TVA, including issues of trust between TVA and the communities it serves, and the opportunity he sees to strengthen the public power model and use it to deliver world-class results during the upcoming decade of change.

Mr. Lyash commented at length on several important proposed actions to be considered by the Board during the balance of the meeting, including the newly formulated Integrated Resource Plan (IRP), the new 10-year financial plan, and the Fiscal Year (FY) 2020 Commercial Contracting Plan designed to provide the basis for a long-term partnership between TVA and the local power companies it serves. During his discussion of these subjects Mr. Lyash responded to questions by Directors Allen and Frazier regarding system performance and TVA's current intent with regard to small modular reactors.

Mr. Lyash reported that during the week before the meeting TVA posted its first environmental, sustainability, and governance report on the agency's internet site. He explained that the report is part of a disclosure and transparency process around TVA's positions, risks, and progress on these three subjects. Mr. Lyash encouraged the public to review the report. He then gave an update on coal combustion residuals, advising that the agency is focusing on: (i) dam safety considerations; (ii) completion of conversion to dry ash handling; (iii) implementation of a state of the art process for handling water; (iv) fortification of programs around groundwater monitoring and treatment; and (v) making decisions on the long-term management and disposal of coal combustion residuals. Mr. Lyash stated TVA has continued to make progress on these issues since the last Board meeting, including formulation of a plan to deal with the issues at

Gallatin Fossil Plant that were the subject of the lawsuit brought by the State of Tennessee, and settlement of that lawsuit based on the plan. Mr. Lyash reported that TVA has also implemented an extensive public outreach program related to coal combustion residuals oriented around the communities where TVA's coal plants are located. Mr. Lyash explained that this outreach includes: (i) meetings with public officials; (ii) providing press availability in the affected communities in order to inform the public; (iii) hosting a series of public open house meetings to allow citizens to ask questions; and (iv) creation of a citizens' panel for each site. At the conclusion of this portion of Mr. Lyash's presentation he responded to a question from Director Frazier regarding the length of time necessary for TVA to complete its coal combustion residual clean-up work, stating that TVA will allow science to inform and guide its decision-making, taking the time to perform the studies necessary to determine the best course of action at each plant location. Mr. Lyash stated that it will take two to four years to perform these studies at each location, and the execution of the decisions reached following completion of those studies could take as much as twenty years to ensure the work is done correctly.

Mr. Lyash next stated that nuclear energy is clean energy and is vital to achievement of TVA's CO2 reduction goals. He noted that under recent organizational changes made by TVA, Tim Rausch, Senior Vice President and Chief Nuclear Officer, has begun reporting directly to Mr. Lyash. Mr. Lyash stated that he expects all of TVA's nuclear plants to be top quartile by 2022, and hopes that by 2025 TVA's nuclear fleet will be the best in the country.

Mr. Lyash then discussed TVA's "Grid 2023" project, which he stated is a companion to the IRP and will move TVA's transmission system to becoming an integrated energy network that incorporates digital technology as well as providing the flexibility and adaptability needed to

integrate renewable energy. Mr. Lyash stated “Grid 2023” will have to be accomplished in coordination with TVA’s local power company partners in order to realize its full value.

Turning to TVA’s FY 2020 goals, Mr. Lyash reported he is shifting his focus to TVA’s people. He stated that TVA’s FY 2020 goals are challenging but achievable, are focused on leadership development and alignment, and are designed to develop a much higher level of employee engagement.

At the conclusion of Mr. Lyash’s presentation, Director Smith asked Mr. Lyash what TVA is doing to make sure it is taking advantage of the best ideas across the utility industry for dealing with coal combustion residuals. Mr. Lyash responded that for the last hundred years coal plants electrified the United States and built its economy, and the industry is now dealing with a hundred years of deferred costs. He explained that TVA is linked directly to other utilities across the country in several ways to ensure it has a clear view of and implements best practices. In addition, TVA is now retaining a group of independent experts to advise it regarding technologies, techniques, and processes for dealing with coal combustion residuals.

Copies of the slides used by Mr. Lyash in his report are filed with the records of the Board as Exhibit 8/22/19A.

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### **19-03-3. Report of the Finance, Rates, and Portfolio Committee**

Director Walter, Chair of the Committee, reported the Committee met on July 24 to review TVA’s FY 2020 budget plan, then again on July 31 to discuss additional quarterly items.

Director Walter spoke briefly about TVA's 2019 IRP, and then invited Dr. Wayne Davis, the Chair of TVA's Regional Energy Resource Council (RERC), to present the RERC's recommendation and advice statement regarding the IRP. Following Dr. Davis' presentation, Director Walter requested and received a report from Laura Campbell, Vice President, Supply Chain, regarding Minute Item 19-03-4. After the vote on Minute Item 19-03-4, Director Walter requested and received a report from John Thomas, Executive Vice President and Chief Financial Officer, regarding Minute Items 19-03-5, 19-03-6, and 19-03-7.

Integrated into his report on Minute Items 19-03-6 and 19-03-7, Mr. Thomas provided extensive information on the FY 2030 Strategic Financial Plan, TVA's new ten-year financial plan. During his reports on Minute Items 19-03-6 and 19-03-7, Mr. Thomas responded to questions from Directors Smith, Howorth, Frazier, and Ryder on related subjects, with occasional participation from Mr. Lyash. Prior to voting on Minute Item 19-03-6, Director Walter advised that two components of Minute Item 19-03-6 are under the purview of the Audit, Risk, and Regulation Committee, after which Director Walter requested and received from Director Ryder, Chair of the Audit, Risk, and Regulation Committee, that committee's concurrence with management's recommendations regarding treatment of regulatory assets and renewal of the Dodd-Frank End User Exemption.

Following the votes on Minute Items 19-03-6 and 19-03-7, Director Walter requested and received a report from Doug Perry, Vice President, Commercial Energy Solutions, regarding Minute Item 19-03-8.



Following the vote on Minute Item 19-03-8, Director Walter introduced and moved for a vote on Minute Item 19-03-9. Following the vote on Minute Item 19-03-9, Director Walter requested and received a report from Mike Skaggs, Executive Vice President and Chief Operating Officer, regarding Minute Item 19-03-10.

Copies of the slides used by Ms. Campbell in her report on Minute Item 19-03-4 are filed with the records of the Board as Exhibit 8/22/19B. Copies of the slides used by Mr. Thomas in his report on Minute Items 19-03-6 and 19-03-7 are filed with the records of the Board as Exhibit 8/22/19D. Copies of the slides used by Mr. Perry in his presentation on Minute Item 19-03-8 are filed with the records of the Board as Exhibit 8/22/19E. Copies of the slides used by Mr. Skaggs in his presentation on Minute Item 19-03-10 are filed with the records of the Board as Exhibit 8/22/19F.

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**19-03-4. Fiscal Year 2019 Integrated Resource Plan**

The Board adopted the following resolution as recommended in a memorandum from the Executive Vice President and Chief Financial Officer, dated July 16, 2019, and filed with the records of the Board as Exhibit 8/22/19G:

WHEREAS TVA issued an Integrated Resource Plan (IRP) and supporting Environmental Impact Statement (EIS), *TVA's Environmental & Energy Future*, in 2011; and

WHEREAS the 2015 IRP provided TVA the direction and flexibility to make energy resource decisions over the next 20 years in a dynamic, ever-changing regulatory and economic environment; and

WHEREAS the Board directed the Chief Executive Officer (CEO) to initiate an update of the 2015 IRP no later than 2020; and

WHEREAS TVA chose to initiate the IRP process earlier because several of the assumptions used to develop the 2015 IRP changed, including a lower demand for electricity, lower prices for natural gas and solar generation and increasing demand for renewable and distributed energy resources (DER); and

WHEREAS in updating the IRP, TVA again used a comprehensive planning process including multiple opportunities for public review and comment; and

WHEREAS important components of the public involvement process included review by and recommendations from TVA's Regional Energy Resource Council (RERC) and frequent interaction with members of an IRP Working Group to obtain the input of diverse stakeholders throughout the planning process; and

WHEREAS, in accordance with the requirement in the TVA Act to use a least-cost system planning process for the selection of new energy resources, TVA used an integrated, least-cost system planning process that takes into account the demand for electricity on the TVA power system, resource diversity, resource reliability, costs, risks, and environmental compliance; and

WHEREAS TVA prepared an Environmental Impact Statement (EIS) to support the 2019 IRP update; and

WHEREAS Section 2(g)(1) of the TVA Act states that the Board shall establish the broad goals, objectives, and policies of TVA, and shall develop long-range plans to guide TVA and assist the CEO in achieving those goals, objectives, and policies; and

WHEREAS, as set out in the attached memorandum to the Board, dated July 16, 2019, the CEO has determined that the recommended planning direction in the IRP is in the best interest of TVA and the public it serves and has approved that direction;

BE IT RESOLVED, That the Board expresses appreciation of and thanks for the hard work of the members of the IRP Working Group during the planning process and the review by and recommendations from the RERC;

RESOLVED further, That the Board finds the 2019 IRP planning process is in accordance with the requirement that TVA use a multi-factor, least-cost system planning process in the selection of future energy resources;

RESOLVED further, That the Board affirms the merits of a diverse energy resource portfolio and of maintaining the flexibility to make energy resource decisions consistent with least-cost planning that fall within the resource ranges depicted in Figure 9-1 of the Final 2019 IRP, which is posted on TVA's website at <https://www.tva.gov/Environment/Environmental-Stewardship/Integrated-Resource-Plan>;

RESOLVED further, That the Board approves the recommended planning direction set forth in Chapter 9 of the 2019 IRP and the additional guidance set forth in Chapter 10 of the 2019 IRP;

RESOLVED further, That the Board directs TVA to monitor future developments that would serve as signposts to guide long-term actions, including the demand for electricity, natural gas prices, customer expectations, regulatory requirements, operating costs for existing units, costs of solar and wind generation, and emerging and developmental technologies; and

RESOLVED further, That the Board directs TVA to initiate an update of the 2019 IRP no later than 2024 and, if appropriate, earlier if future developments make this appropriate.

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#### **19-03-5. Financial Performance Update**

John Thomas, Executive Vice President and Chief Financial Officer, presented financial results for the third quarter of FY 2019. Mr. Thomas provided a summary of key metrics for the quarter, including operating revenues, controllable operation and maintenance costs, net income, interest expense, and total financial obligations. Mr. Thomas then reviewed the Summary Income Statement, attributing net income favorable to budget to higher than anticipated operating revenues and lower expenses. Mr. Thomas next reviewed the Summary Cash Flow Statement for the quarter, noting that total financing obligations were \$1.1 billion favorable to budget. Mr. Thomas closed his presentation with a high level review of actual results versus the planned outcome.

Copies of the slides used by Mr. Thomas in his report are filed with the records of the Board as Exhibit 8/22/19C.

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**19-03-6. Fiscal Year 2020 Financial Plan and Budget**

The Board adopted the following resolution as recommended in a memorandum from the Executive Vice President and Chief Financial Officer, dated July 22, 2019, and filed with the records of the Board as Exhibit 8/22/19H:

WHEREAS a memorandum from the Executive Vice President and Chief Financial Officer (CFO), dated July 22, 2019 (Memorandum), a copy of which is filed with the records of the Board of Directors as Exhibit 8/22/19H, recommends the approval of the proposed fiscal year (FY) 2020 budget and certain related items as described in the Memorandum including:

- a) Operating and capital budgets for FY 2020; and
- b) Proposed capital projects that exceed \$50 million and acquisition of land rights in connection with certain capital projects; and
- c) FY 2020 Commercial Transactions Contracting Plan; and
- d) Retaining for use in the operation of the TVA power system the entire margin of net power proceeds remaining at the conclusion of FY 2020; and
- e) Delegation of authority to the Chief Executive Officer (CEO) (1) to enter into contracts with delivered energy durations of up to 20 years and terms of up to 25 years for wholesale power and energy purchases and other forward capacity agreements, limited to 1,250 MWs in the aggregate, (2) to enter into contractual arrangements to purchase and sell renewable energy and renewable energy certificates (RECs) in quantities sufficient to meet the needs of Local Power Company (LPC)-served and TVA directly served customers, provided that these contractual arrangements will be limited in FY 2020 to 100 MW equivalent base load (~400 MW<sub>AC</sub> solar) for existing load and 250 MW equivalent base load (~1,000 MW<sub>AC</sub> solar) for new load and will have delivered energy durations of up to 20 years and terms of up to 25 years, (3) to purchase equipment or direct the completion of physical work, in a total combined amount not to exceed \$105 million, for TVA-directed solar projects, and (4) to amend the Tennessee Valley Authority Asset Retirement Trust (ART) to permit funds in the ART to be used also to fund capital obligations and capital projects; and
- f) Continuing to recognize certain regulatory assets and liabilities and to follow certain accounting policies; and

WHEREAS the Board of Directors previously approved TVA's use during FY 2019 of an exemption (the End-User Exemption) from the Dodd-Frank Wall Street Reform and

Consumer Protection Act's mandatory clearing requirement and TVA management has recommended that the Board of Directors extend this approval to FY 2020; and

WHEREAS as required under Section 9B of the Rules and Regulations of the TVA Retirement System (Retirement System), the Retirement System's Board of Directors has informed the Board of Directors of the minimum required FY 2020 contribution to the Retirement System; and

WHEREAS after consideration of the minimum required contribution and the amendments to the Rules and Regulations of the Retirement System that became effective on October 1, 2016, TVA management has recommended that the Board of Directors approve a \$300 million contribution to the Retirement System for FY 2020; and

WHEREAS TVA management has recommended that the Board of Directors (1) approve the final amount of tax equivalent payments to states and counties for FY 2019 and (2) authorize and direct the CFO to make, or cause to be made, estimated tax equivalent payments to states and counties for FY 2020;

BE IT RESOLVED, That the Board of Directors hereby approves the FY 2020 budget;

RESOLVED further, That the Board of Directors approves the projects listed in the Memorandum's Attachment 2 and delegates to the CEO (1) the authority to determine whether all required reviews have been completed and (2) the final decision to proceed with an identified project subject to the budget approved by the Board of Directors;

RESOLVED further, That the Board of Directors approves, in addition to acquisitions approved in prior budgets, acquiring the land rights associated with the capital projects listed in the Memorandum's Attachment 3, including acquiring the land rights through condemnation, contingent upon the CEO's approval for those projects for which such approval is required or upon such further review of any individual actions which the Board of Directors may subsequently require;

RESOLVED further, That the Board of Directors approves the FY 2020 Commercial Transactions Contracting Plan attached to the Memorandum as Attachment 4;

RESOLVED further, That, in addition to the contracting authorization that would result from approval of the FY 2020 Commercial Transactions Contracting Plan, the Board of Directors delegates to the CEO the authority to enter into contracts for wholesale power and energy purchases and other forward capacity agreements with delivered energy durations of up to 20 years and terms of up to 25 years, limited to 1,250 MWs in the aggregate, provided that the CEO notifies the members of the Finance, Rates, and Portfolio Committee prior to entering into any such agreement;

RESOLVED further, That the Board of Directors hereby delegates to the CEO the authority to enter into contractual arrangements to purchase and sell renewable energy and renewable energy credits (RECs) in quantities sufficient to meet the needs of LPC-served and TVA directly served customers, provided that these contractual arrangements will be limited in FY

2020 to 100 MW equivalent base load (~400 MW<sub>AC</sub> solar) for existing load and 250 MW equivalent base load (~1,000 MW<sub>AC</sub> solar) for new load and will have delivered energy durations of up to 20 years and terms of up to 25 years;

RESOLVED further, That the Board of Directors delegates to the CEO the authority to purchase equipment or direct the completion of physical work, in a total combined amount not to exceed \$105 million, for TVA-directed solar projects;

RESOLVED further, That the Board of Directors (1) acknowledges that establishing the ART and the Nuclear Decommissioning Trust (NDT) was necessary and appropriate to carry out the provisions of the TVA Act, (2) delegates to the CEO authority to amend the ART to permit funds in the ART to be used also to fund capital obligations and capital projects, (3) directs funds in the ART and the NDT to continue to be invested in accordance with the prudent investor rule, and (4) determines that continuing to invest funds in the ART and the NDT in accordance with the prudent investor rule is necessary and appropriate to carry out the provisions of the TVA Act;

RESOLVED further, That, in accordance with Section 26 of the TVA Act, the Board of Directors approves retaining the entire margin of net power proceeds remaining at the conclusion of FY 2020 for use in the operation of the TVA power system;

RESOLVED further, That the Board of Directors approves (1) TVA's following the allowance for funds used during construction policy described in Attachment 5 of the Memorandum, (2) TVA's recognizing regulatory assets and liabilities as described in Attachment 5 of the Memorandum as such amounts are probable of collection (or probable of being refunded) in future rates, and (3) TVA's accounting for certain regulatory accounting matters as described in Attachment 5 of the Memorandum;

RESOLVED further, That the Board of Directors hereby authorizes TVA to use the End-User Exemption during FY 2020 in connection with all new and outstanding swaps as well as any amendments or modifications to new or outstanding swaps;

RESOLVED further, That the Board of Directors approves a contribution of \$300 million to the Retirement System for FY 2020 and finds this contribution to be sufficient to meet the requirements of Section 9B of the Retirement System Rules and Regulations and TVA's obligations under Section 11A of the Retirement System Rules and Regulations;

RESOLVED further, That the Board of Directors, in accordance with Section 13 of the TVA Act, hereby finally determines that the amounts set out in Attachments 6 and 7 of the Memorandum are the amounts due and payable for FY 2019 to the respective states and counties named in such schedules;

RESOLVED further, That the Board of Directors authorizes and directs the CFO to make, or cause to be made, payments to states for FY 2020 in accordance with established procedures on the basis of 98 percent of the estimated annual payments to states for FY 2020 and payments to counties on the basis of 100 percent of the estimated annual payments to counties

for FY 2020, until the Board has made a final determination of the respective amounts due for FY 2020;

RESOLVED further, That the CFO shall cause to be explained to the appropriate state and county officials that the payments for FY 2020 are based upon preliminary estimates and are subject to later adjustment.

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**19-03-7.      Financing Authority**

The Board adopted the following resolution as recommended in a memorandum from the Executive Vice President and Chief Financial Officer, dated July 22, 2019, and filed with the records of the Board as Exhibit 8/22/19I:

Resolution #1

PROPOSED SUPPLEMENTAL RESOLUTION  
AUTHORIZING THE ISSUANCE OF UP TO \$2,000,000,000 OF  
TENNESSEE VALLEY AUTHORITY  
POWER BONDS

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BE IT RESOLVED by the Board of Directors of the Tennessee Valley Authority (the “Corporation”) as follows:

ARTICLE I

AUTHORITY, DEFINITIONS, AND STATUS

SECTION 1.1. Authority. This Supplemental Resolution is adopted, and the Bonds to be issued hereunder are authorized, pursuant to the provisions of (a) the Tennessee Valley Authority Act of 1933, as amended, and (b) the Basic Tennessee Valley Authority Power Bond Resolution adopted by the Corporation on October 6, 1960, as amended by an Amendatory Resolution on September 28, 1976, and by the

Second Amendatory Resolution and the Third Amendatory Resolution on October 17, 1989, and by the Fourth Amendatory Resolution on March 25, 1992 (as so amended, the “Resolution”).

The Bonds issued pursuant to this Supplemental Resolution may be issued as Book-Entry Bonds in accordance with the Book-Entry Procedures and a Fiscal Agency Agreement (the “Fiscal Agency Agreement”) dated as of October 7, 1997, as may be amended from time to time, between the Corporation and the Federal Reserve Banks, as fiscal agents (together, the “Fiscal Agent”), or such Bonds may be issued as Certificated Bonds, and such Certificated Bonds shall be executed on behalf of TVA by a Designated Officer (as defined in Section 2.2 of this Supplemental Resolution)—or such officer’s duly authorized representative—whose signature may be manual or facsimile.

SECTION 1.2. Definitions. All terms which are defined in the Resolution shall have the same meanings in this Supplemental Resolution. The term “New Power Bonds” shall mean the Bonds authorized by this Supplemental Resolution.

SECTION 1.3. Supplemental Resolution to Constitute a Contract. In consideration of the purchase and acceptance of the New Power Bonds by those who shall hold them from time to time, this Supplemental Resolution, including all terms and conditions set out in the Officer’s Certificate as described in Section 2.1 below, shall constitute a contract between them and the Corporation. The covenants and agreements of the Corporation contained in this Supplemental Resolution shall be for the equal benefit, protection, and security of all holders of New Power Bonds.

## ARTICLE II

### AUTHORIZATION OF NEW POWER BONDS

SECTION 2.1. Principal Amount, Establishment of Terms. There is hereby authorized for the purpose of providing capital for the Corporation in order to assist in financing the Corporation’s Power Program (including refunding of Evidences of Indebtedness issued for such purposes) one or more series of New Power Bonds in the aggregate principal amount of up to \$2,000,000,000. That amount may be reduced by the sum of (a) the amount of other power financings commenced during fiscal year 2020 as described in the resolution of the Board of Directors of the Corporation (“Board”) dated August 22, 2019, entitled “FY 20 Financial Shelf - Execution of Other Financing Arrangements,” and (b) the amount of power bonds issued under the resolution of the Board dated August 22, 2019, entitled “FY 20 Financial Shelf – Reopening of Existing Power Bonds.”

The New Power Bonds must be issued on or before September 30, 2020, and may be (a) issued as Book-Entry Bonds (in which case the Book-Entry Procedures shall be applicable thereto) or (b) issued as Certificated Bonds. The terms and conditions of the New Power Bonds of each series shall be established in accordance



with the provisions of Section 2.2 of this Supplemental Resolution and set forth in an Officer's Certificate, prior to the issuance of New Power Bonds of each series. Such terms and conditions of the New Power Bonds of each series, subject to any limitation set out in this Supplemental Resolution, may include:

- (a) the title of the New Power Bonds of such series (which shall distinguish the New Power Bonds of such series from Bonds of all other series);
- (b) the aggregate principal amount of the New Power Bonds of such series which may be issued and delivered pursuant to this Supplemental Resolution;
- (c) the date or dates on which the principal of the New Power Bonds of such series is payable;
- (d) the rate or rates at which the New Power Bonds of such series shall bear interest or the method by which such rate or rates shall be determined, whether the rate shall be fixed or floating, the date from which such interest shall accrue, and the interest payment dates on which such interest shall be payable;
- (e) the currency in which the New Power Bonds of such series shall be denominated;
- (f) in the case of Certificated Bonds, designation of any paying agent, listing agent, or transfer agent therefore (which may be the Corporation);
- (g) in the case of Certificated Bonds, the form and method of issuance and transfer of any New Power Bonds of such series;
- (h) in the case of Certificated Bonds, the designation of a depository for the New Power Bonds of such series;
- (i) designation of the New Power Bonds of such series as Book-Entry Bonds or Certificated Bonds;
- (j) the period or periods within which, the price or prices at which, and the terms and conditions upon which New Power Bonds of such series may be redeemed at the option of the Corporation; and
- (k) any other terms or conditions of such series (which terms and conditions shall not be inconsistent with the provisions of the Resolution or this Supplemental Resolution).

All New Power Bonds of any one series shall be substantially identical except as to denomination and except as may otherwise be provided in or pursuant to this Supplemental Resolution and set forth in such Officer's Certificate.

The terms and conditions of each series of New Power Bonds shall be established as provided in Section 2.2 of this Supplemental Resolution. In the case of Certificated Bonds, the New Power Bonds of such series shall be substantially in the form established by the Designated Officer in the Officer's Certificate.

SECTION 2.2. Designated Officers. (a) The terms and conditions of each series of New Power Bonds shall be established by a designated officer of the Corporation (the "Designated Officer") appointed by this Supplemental Resolution and shall be set forth in an Officer's Certificate executed by the Designated Officer.

(b) The Designated Officers are the Chief Financial Officer and the Treasurer of the Corporation. Either of the Designated Officers is authorized to exercise any of the power and authority delegated herein to the Designated Officers.

(c) A Designated Officer may at any time on or prior to September 30, 2020, specify and determine the terms and conditions of the New Power Bonds of one or more series to be issued under this Supplemental Resolution and the terms and conditions of the sale of such New Power Bonds as permitted to be specified in Section 2.1 of this Supplemental Resolution, provided that:

(i) the aggregate principal amount of all New Power Bonds of all series issued hereunder on or prior to September 30, 2020, shall not exceed the amount authorized by this Supplemental Resolution (including any New Power Bonds of any series issued in future installments pursuant to Section 2.3 of this Supplemental Resolution);

(ii) the Maturity Date (the date on which the principal and any accrued and unpaid interest shall be due on any such series of Bonds issued hereunder) of the New Power Bonds of each series shall not be more than 50 years from the date of issuance thereof; and

(iii) the maximum effective interest cost on the New Power Bonds of each series having fixed interest rates shall not exceed 8 percent per annum, and the sale price of the New Power Bonds of each series shall not be less than 90 percent of the principal amount.

(d) The Designated Officers are authorized, separately or jointly, in the name and on behalf of the Corporation, to take any and all such actions and to do, or authorize to be done, all such things as the Designated Officers may deem necessary or appropriate to effectuate the issuance and sale of New Power Bonds under this Supplemental Resolution including, but not limited to, amending this Supplemental Resolution for the purpose of issuing a future installment of New Power Bonds as set forth in Section 2.3 hereof.

SECTION 2.3. New Power Bonds Issuable in Installments.

Notwithstanding any limitations established pursuant to Sections 2.1 and 2.2 of this Supplemental Resolution relating to the aggregate principal amount of any series of New Power Bonds or the date by which New Power Bonds must be issued, New Power Bonds of each series may be issued in one or more future installments of such series as determined to be appropriate by a Designated Officer.

If so provided in an amendment to this Supplemental Resolution, the aggregate principal amount of such future installments, together with all series initially issued hereunder, may exceed \$2,000,000,000, and the future installments may be issued after September 30, 2020. For the avoidance of doubt, the amendment to this Supplemental Resolution (a) pursuant to Section 7.2(d) of the Resolution, shall not require the consent of holders of Bonds and (b) if within the then-current authorization of the Board for principal amount and time of issuance, shall not require approval of the Board.

New Power Bonds of any series issued in future installments shall be identical in all respects with New Power Bonds of such series initially issued pursuant to Sections 2.1 and 2.2 of this Supplemental Resolution (with any appropriate related changes, including changes in the issue date, issue price, and interest commencement date).

SECTION 2.4. Interest, Maturity, and Place of Payment. Payments of principal (and premium, if any) and interest on the New Power Bonds will be made on the applicable payment dates to holders of the New Power Bonds (as described in Section 9.8 of the Resolution), which are holders as of the close of business on the Business Day preceding such payment dates, by credit of the payment amount to holders' accounts at the Federal Reserve Banks in accordance with the Book-Entry Procedures in the case of Book-Entry Bonds, unless otherwise specified in the Officer's Certificate. Such payments for Certificated Bonds shall be made in the manner described in the Officer's Certificate. Interest payable on New Power Bonds of each series shall be computed on the basis of a 360-day year of twelve 30-day months, unless otherwise specified in the Officer's Certificate.

In any case in which an interest payment date, redemption date, or the Maturity Date is not a Business Day, payment of interest or principal (and premium, if any), as the case may be, shall be made on the next succeeding Business Day with the same force and effect as if made on such interest payment date, redemption date, or the Maturity Date, unless otherwise specified in the Officer's Certificate. The term "Business Day" shall mean any day other than (a) a Saturday or Sunday or (b) a day on which banking institutions in New York City are authorized or required by law or executive order to be closed, unless otherwise specified in the Officer's Certificate.

## ARTICLE III

## DESCRIPTION OF NEW POWER BONDS

SECTION 3.1. General Description. In the case of Book-Entry Bonds, the New Power Bonds of each series will be issued and maintained and shall be transferable and exchangeable only in accordance with the Book-Entry Procedures on the book-entry system of the Federal Reserve Banks in minimum principal amounts set forth in the Officer's Certificate for such series of New Power Bonds.

In the case of Certificated Bonds, except as otherwise permitted in the Officer's Certificate referred to in Section 2.1 above, the New Power Bonds of each series may be issued, may be maintained, and may be transferable and exchangeable in accordance with the procedures of the depository, if any, named in the Officer's Certificate referred to in Section 2.1 above or as otherwise provided in such Officer's Certificate.

The New Power Bonds of each series will not be obligations of, nor will payment of the principal thereof or interest thereon be guaranteed by, the United States of America. Such principal and interest will be payable solely from the Corporation's Net Power Proceeds.

SECTION 3.2. Holders of New Power Bonds. In the case of Book-Entry Bonds, the New Power Bonds of each series may be held of record only by depository institutions (as such term is defined in the Book-Entry Procedures). In the case of Certificated Bonds, the New Power Bonds of each series may be held of record only by the depository designated in the Officer's Certificate or as otherwise provided in the Officer's Certificate. Such depository entities shall be deemed to be the holders of the New Power Bonds for all purposes of the Resolution and this Supplemental Resolution.

SECTION 3.3. Recital. The New Power Bonds of each series shall be issued, and shall be deemed to contain a recital that they are issued, pursuant to Section 15d of the Act.

SECTION 3.4. Global Securities. In the case of Certificated Bonds, the New Power Bonds of such series may be represented by one or more global securities ("Global Securities") registered in the name of a depository nominee for the accounts of participants. Such Global Security or Securities of each series shall be delivered to such depository (the "Depository"), or a nominee or custodian thereof. Arrangements for any such Global Security or Securities will be as provided for in the Officer's Certificate referred to in Section 2.1 of this Supplemental Resolution.

SECTION 3.5. Certificate of Authentication. In the case of Certificated Bonds, New Power Bonds, including any Global Securities representing such New Power Bonds, shall contain the following certificate of authentication:

This is one of the Tennessee Valley Authority Power Bonds described in the Basic Resolution and is a Tennessee Valley Authority Power Bond authorized by the Supplemental Resolution.

Tennessee Valley Authority

By \_\_\_\_\_  
Authorized Officer

SECTION 3.6. Transfer of New Power Bonds. In the case of Certificated Bonds, the New Power Bonds of such series issued may be transferred in such manner as described in the Officer's Certificate referred to in Section 2.1 of this Supplemental Resolution; provided, however, any such New Power Bonds may be transferred only for registered Certificated Bonds and may not be transferred for coupon Certificated Bonds.

#### ARTICLE IV

#### FISCAL AGENT

SECTION 4.1. Designation of Fiscal Agent. In the case of Book-Entry Bonds, the Federal Reserve Banks are hereby designated as Fiscal Agent for the New Power Bonds of each series, subject to all the provisions of the Book-Entry Procedures, the Resolution, and this Supplemental Resolution.

#### ARTICLE V

#### PUBLIC LAW NO. 105-62

SECTION 5.1. Public Law No. 105-62. Each holder of the New Power Bonds of each series, by such holder's acceptance thereof, shall thereby acknowledge and accept that, notwithstanding any language in the Resolution, any action that the Corporation may take pursuant to the paragraph captioned "TENNESSEE VALLEY AUTHORITY" in Title IV of the Energy and Water Development Appropriations Act, 1998, Pub. L. No. 105-62, 111 Stat. 1320, 1338 (1997) (such paragraph being hereinafter referred to as the "Appropriations Act Paragraph"), including, but not limited to, any use of revenues by the Corporation from its Power Program for "essential stewardship activities," as such term is used in the Appropriations Act Paragraph, shall not be considered an Event of Default or breach of any provision of the Resolution. The Appropriations Act Paragraph states:

For the purpose of carrying out the provisions of the Tennessee Valley Authority Act of 1933, as amended (16 U.S.C. ch. 12A), including hire, maintenance, and operation of aircraft, and purchase and hire of passenger motor vehicles, \$70,000,000, to remain available until expended, of which \$6,900,000 shall be available for operation, maintenance, surveillance, and improvement of Land Between the Lakes; and for essential stewardship activities for which appropriations were provided to the Tennessee Valley Authority in Public Law 104-206, such sums as are necessary in fiscal year 1999 and thereafter, to be derived only from one or more of the following sources: nonpower fund balances and collections; investment returns of the nonpower program; applied programmatic savings in the power and nonpower programs; savings from the suspension of bonuses and awards; savings from reductions in memberships and contributions; increases in collections resulting from nonpower activities, including user fees; or increases in charges to private and public utilities both investor and cooperatively owned, as well as to direct load customers: *Provided*, That such funds are available to fund the stewardship activities under this paragraph, notwithstanding sections 11, 14, 15, 29, or other provisions of the Tennessee Valley Authority Act, as amended, or provisions of the TVA power bond covenants: *Provided further*, That the savings from, and revenue adjustments to, the TVA budget in fiscal year 1999 and thereafter shall be sufficient to fund the aforementioned stewardship activities such that the net spending authority and resulting outlays for these activities shall not exceed \$0 in fiscal year 1999 and thereafter.

Resolution #2

### **PROPOSED BOARD RESOLUTION**

(FY 20 Financial Shelf - Reopening of Existing Power Bonds)

RESOLVED, That the Board of Directors hereby approves the amendment of any previously issued Supplemental Resolution and any related resolutions to permit the potential issuance during fiscal year 2020 of an additional installment of power bonds under such previously issued Supplemental Resolution and hereby authorizes the Chief Financial Officer and the Treasurer, separately or jointly, to execute any such amendments, as long as (1) (a) the Finance, Rates, and Portfolio Committee (or successor committee) is notified of the issuance of the new power bonds and (b) both the Chief Executive Officer and the Chief Financial Officer approve the issuance of such bonds and (2) the amount of new power bonds issued pursuant to this resolution, together with (a) the amount of bonds issued pursuant to the Supplemental Resolution adopted on August 22, 2019, and (b) the amount of other power financings commenced during fiscal year 2020 as described in the resolution of the Board of Directors dated August 22, 2019, entitled "FY 20 Financial Shelf - Execution of Other Financing Arrangements," shall not exceed \$2,000,000,000.

**PROPOSED BOARD RESOLUTION**

(FY 20 Financial Shelf - Issuance of Bonds, Execution of Interest Rate and Currency Exchange Rate Hedges)

RESOLVED, That in connection with the issuance of Tennessee Valley Authority Power Bonds as authorized by a Supplemental Resolution adopted on August 22, 2019 (the “Supplemental Resolution”), the Board of Directors hereby authorizes senior TVA officials to take the following actions as long as (1) the Finance, Rates, and Portfolio Committee (or successor committee) is notified of the issuance of the new power bonds and (2) both the Chief Executive Officer and the Chief Financial Officer approve the issuance of such bonds:

The Chief Financial Officer, the Treasurer, and their respective duly authorized representatives, or any one or more of them, are hereby authorized, individually or jointly, to (1) approve and execute underwriting agreements or subscription agreements with such underwriters or managers and incorporating such terms and conditions (not inconsistent with the Supplemental Resolution) as any such authorized individual may determine to be appropriate; (2) approve and issue invitations for bids for the purchase of bonds, accept and reject bids received, and execute any bond purchase contracts, incorporating such terms and conditions (not inconsistent with the Supplemental Resolution) as any such authorized individual may determine to be appropriate; (3) approve and execute documents for the listing of bonds authorized by the Supplemental Resolution on the New York Stock Exchange and other exchanges as any such authorized individual may determine to be appropriate; (4) in the case of Certificated Bonds, approve arrangements and execute documents for the issuance of bonds through the use of The Depository Trust Company or any other depository that any such authorized individual may determine to be appropriate; (5) approve and execute any agreement with any paying agent, listing agent, global agent, or transfer agent as any such authorized individual may determine to be appropriate; (6) in the case of Certificated Bonds, execute and deliver bonds authorized by the Supplemental Resolution; and (7) approve and sign any offering circulars or any offering circular supplements or amendments as may be utilized in connection with the sale of any bonds authorized by the Supplemental Resolution;

The Chief Financial Officer, the Treasurer, and their respective duly authorized representatives, or any one or more of them, are hereby authorized, individually or jointly, to hedge interest rate risk and currency exchange rate risk in connection with the issuance of the Tennessee Valley Authority Power Bonds authorized by the Supplemental Resolution (even if the new bonds are not issued in fiscal year 2020) using swaps, options, futures, or Treasury locks, or any combination of these instruments, as long as (1) these instruments are standard in the industry and (2) prior to using these instruments, (a) the Finance, Rates, and Portfolio Committee (or successor committee) is notified of the use of such

instruments and (b) both the Chief Executive Officer and the Chief Financial Officer approve using such instruments;

The Chief Financial Officer, the Treasurer, the Controller, the General Counsel, and the Associate General Counsel for Enterprise, and their respective duly authorized representatives, or any one or more of them, are hereby authorized to execute and deliver, separately or jointly, and under the seal of TVA, or otherwise as may be required, all other such instruments, documents, and certificates, receive and make all such payments, and do all such other acts and things as in their opinion or in the opinion of any of them may be necessary or appropriate in order to complete the issuance of the Tennessee Valley Authority Power Bonds authorized by the Supplemental Resolution and to hedge interest rate risk or currency exchange rate risk associated with the issuance of such power bonds.

Resolution #4

### **PROPOSED BOARD RESOLUTION**

(FY 20 Financial Shelf - Execution of Other Financing Arrangements)

RESOLVED, That the Board of Directors hereby authorizes TVA to enter into other financing arrangements in an amount that, when combined with the power bonds issued under the Supplemental Resolution adopted on August 22, 2019, and the power bonds issued under the resolution of the Board of Directors dated August 22, 2019, entitled “FY 20 Financial Shelf – Reopening of Existing Power Bonds,” does not exceed \$2,000,000,000, as long as on or prior to September 30, 2020, (1) the Finance, Rates, and Portfolio Committee (or successor committee) is notified of the arrangement and (2) both the Chief Executive Officer and the Chief Financial Officer approve entering into the arrangement;

RESOLVED further, That such other financing arrangements may include, but are not limited to, lease, lease-leaseback, lease-purchase, power purchase, and similar agreements involving new generation facilities or new assets that are substantially related, as well as electricity prepayments, which arrangements and related authorizations are described in more detail below:

#### ***Lease-Purchase Financing Arrangements***

The lease-purchase financing arrangements may include, but are not limited to, transactions whereby TVA sells new generation facilities or portions thereof, or new assets that are substantially related to existing facilities, to third-party lessor(s) and TVA leases such assets from such third-party lessor(s) for a term upon the expiration of which such facility or asset may be returned to TVA; in connection with these arrangements, TVA may also enter into construction agreements pursuant to which TVA may agree to complete construction and start-



up and test such facilities or assets for a fixed or capped price, or on a cost, cost-plus, or other basis, and by deadlines to be agreed under such agreements;

the lease-purchase arrangements may also contain terms, conditions, and covenants related to the ownership, operation, and maintenance of such facility or assets as well as events of default and remedies during the term thereof;

such lease-purchase arrangements may also include provisions related to early buyout, end-of-term purchase options, and termination purchase options upon the occurrence of various events at a price that may be pre-determined or may be the fair-market value or other value at such time as TVA may agree;

TVA's rent payments under such lease-purchase arrangements may be fixed or variable and may be in amounts sufficient to cover any debt service or equity returns of such third-party lessor(s); and

such lease-purchase arrangements may contain such other terms and conditions as may be appropriate for such transactions at such time;

### ***Lease, Lease-Lease, and Sale-Lease Financing Arrangements***

The lease, lease-lease, and sale-lease financing arrangements may include, but are not limited to, transactions whereby TVA leases or sells a generation facility or portion thereof, or new assets that are substantially related to existing facilities, to third-party lessor(s) for value and leases such facilities or assets from such lessor(s) for a term that may be for a period less than the expected useful life of the facility or asset;

in connection with these arrangements, TVA may also enter into construction agreements pursuant to which TVA may agree to complete construction and start-up and test such facilities or assets for a fixed or capped price, or on a cost, cost-plus, or other basis, and by deadlines to be agreed under such agreements;

such arrangements may contain terms, conditions, and covenants related to the ownership, operation, and maintenance of such facility or assets as well as events of default and remedies;

such arrangements may also include provisions related to early buyout, end-of-term purchase options, and termination purchase options upon the occurrence of various events at a price that may be pre-determined or may be the fair-market value or other value at such time as TVA may agree;

TVA may agree under such arrangements to pay periodic rent and any payments related to repurchase of the facility or asset and other amounts as may be provided therein; and

such arrangements may contain such other terms and conditions as may be appropriate for such transactions at such time;

### ***Power Purchase Arrangements***

The power purchase arrangements may include, but are not limited to, transactions whereby TVA sells new generation facilities or portions thereof to a third party, including sales of in-service facilities pursuant to options granted during construction or operation, or assists in developing new generation facilities, and TVA purchases the output thereof on terms that may require TVA to make fixed or variable payments, which payments may be based on cost of service or otherwise, and may be payable without regard to whether such facilities are completed, operating, or operable;

in connection with these arrangements, TVA may also enter into construction agreements pursuant to which TVA may agree to complete construction and start-up and test such facilities or assets for a fixed or capped price, or on a cost, cost-plus, or other basis, and by deadlines to be agreed under such agreements;

such power purchase arrangements may also contain terms, conditions, and covenants related to the ownership, operation, and maintenance of such facility or assets as well as events of default and remedies;

such power purchase arrangements may also include provisions related to early buyout, end-of-term purchase options, and termination purchase options upon the occurrence of various events at a price that may be pre-determined or may be the fair-market value or other value at such time as TVA may agree; and

such power purchase arrangements may be executed in combination with other financing arrangements;

### ***Electricity Prepayments***

The electricity prepayments may include, but are not limited to, transactions whereby customers of TVA power prepay TVA for certain electricity costs in exchange for reductions in the price that the customers pay TVA for electricity in the future, which reductions may be reflected as a credit or a discount on the customers' bill or otherwise and may be in amounts and for periods of time as agreed upon by TVA and the customers;

in connection with these arrangements, TVA may enter into commitment agreements, amend power contracts, and enter into other appropriate contractual arrangements; and

such arrangements may contain such terms and conditions as may be appropriate for such transactions at such time;

RESOLVED further, That the Board of Directors believes it is desirable for TVA to have the flexibility to enter into other financing arrangements, and that, subject to the other provisions of this resolution, the grant by the Board of Directors of authority for TVA to enter into other financing transactions should be construed broadly to permit TVA to enter into the other financing transactions in amounts and as described in this resolution or any similar transactions (including master financing facilities utilizing any one or more of these other financing arrangements) on such terms and conditions as market conditions dictate at the time of such financings;

RESOLVED further, That the Chief Financial Officer, the Treasurer, and their respective duly authorized representatives, or any one or more of them, are hereby authorized, individually or jointly, to (1) engage advisors, appraisers, and independent engineers; (2) select equity investors and underwriters; (3) arrange for the listing of any lease debt; (4) approve offering materials; (5) execute term sheets; (6) execute transaction documents; and (7) make applications and filings in connection with the other financing arrangements;

RESOLVED further, That the Chief Financial Officer, the Treasurer, and their respective duly authorized representatives, or any one or more of them, are hereby authorized, individually or jointly, to hedge interest rate risk and currency exchange rate risk in connection with entering into the other financing arrangements described above using swaps, options, futures, or Treasury locks, or any combination of these instruments, as long as these instruments are standard in the industry and as long as on or prior to September 30, 2020, (1) the Finance, Rates, and Portfolio Committee (or successor committee) is notified of the hedge and (2) both the Chief Executive Officer and the Chief Financial Officer approve entering into the hedge;

RESOLVED further, That the Chief Financial Officer, the Treasurer, the Controller, the General Counsel, and the Associate General Counsel for Enterprise, and their respective duly authorized representatives, or any one or more of them, are hereby authorized to execute and deliver, separately or jointly, and under the seal of TVA, or otherwise as may be required, all other such instruments, documents, and certificates, receive and make all such payments, and do all such other acts and things as in their opinion or in the opinion of any of them may be necessary or appropriate in order to complete the other financing arrangements and to hedge interest rate risk or currency exchange rate risk associated with such other financing arrangements.

Resolution #5

**PROPOSED BOARD RESOLUTION**

(FY 20 Financial Shelf – Retirement and Purchase of Outstanding Debt)

RESOLVED, That the Board of Directors delegates to the Chief Financial Officer, the Treasurer, and their duly authorized representatives, or any one or more of them, authority to retire or purchase any outstanding debt through cash purchases and/or exchanges for securities, in open market purchases, privately negotiated transactions, or otherwise, at such time or times and at

such prices as determined by such officer or representative to be in TVA's financial interest. For the avoidance of doubt, this delegation extends beyond fiscal year 2020 and will remain in place until revoked by the Board of Directors.

\* \* \*

**19-03-8. Long Term Partnership Option for Local Power Companies**

The Board adopted the following resolution as recommended in a memorandum from the Executive Vice President and Chief Financial Officer, dated July 31, 2019, and filed with the records of the Board as Exhibit 8/22/19J:

WHEREAS the weighted average length of the termination notice required under TVA's wholesale power contracts with local power companies (LPCs) that distribute TVA power is less than 7 years; and

WHEREAS increasing the length of TVA's wholesale power contracts with its LPCs provides the best opportunity (i) to ensure that TVA has the revenue necessary to satisfy its long-term financial obligations as they come due and (ii) to provide more certainty in TVA's long-term generation and financial planning; and

WHEREAS TVA has an opportunity to extend the termination notice requirement with each LPC to 20 years, which will support TVA's mission to make life better for the people of the Valley by helping fulfill TVA's statutory obligation to sell power at rates as low as are feasible; and

WHEREAS the financial benefits from such long-term contracts can be shared with those LPCs that agree to extend the termination notice requirement to 20 years in the form of monthly bill credits equal to a percentage of the amount that distributors pay TVA through base rates that are subject to adjustment, which currently include on-peak demand, maximum demand, non-fuel energy, and grid access charges; and

WHEREAS adding certain defaults and remedies provisions to the wholesale power contract will strengthen the long-term commitments made by the parties; and

WHEREAS as set forth in a memorandum dated July 31, 2019 (Memorandum), which is filed with records of the Board as Exhibit 8/22/19J, the Executive Vice President & Chief Financial Officer (CFO) has recommended, after considering TVA's financial planning needs and objectives, that the Board approve the terms of a standard long-term agreement to be entered into between TVA and interested LPCs to establish and maintain a long-term contractual arrangement;

BE IT RESOLVED, that, contingent upon satisfactory completion of any required environmental reviews, the Board of Directors hereby (i) approves the implementation of a standard long-term agreement consistent with the Standard Elements set forth in the Memorandum, and (ii) delegates authorities to the Chief Executive Officer to implement and change, with oversight, the Standard Elements for such agreements as described in the Memorandum.

\* \* \*

**19-03-9. >100MW Firm Power Available To A Directly Served Customer**

The Board adopted the following resolution as recommended in a memorandum from the Senior Vice President, Customer Relations, dated July 12, 2019, and filed with the records of the Board as Exhibit 8/22/19K:

WHEREAS a directly served customer has located an operation within the service territory of the Tennessee Valley Authority (TVA); and

WHEREAS TVA is currently supplying power to the customer, and the customer projects requiring over 100 megawatts of firm power for their operation; and

WHEREAS TVA Board approval is required to authorize TVA to make available new amounts of firm power exceeding 100 megawatts under an industrial power contract; and

WHEREAS TVA expects to have sufficient generating and transmission capacity to supply these projected firm power requirements; and

WHEREAS a memorandum, which contains information that the customer considers confidential and business sensitive, from the Senior Vice President, Customer Relations, dated July 12, 2019 (Confidential Memorandum), a copy of which is filed with the records of the Board as Exhibit 8/22/19K, recommends that TVA make available firm power to meet the customer's power requirements;

BE IT RESOLVED, That after review of said Confidential Memorandum, the Board of Directors finds it to be appropriate and in the interest of TVA, and hereby approves, making available over 100 megawatts of firm power to meet the power requirements of the customer as set forth in the attached Confidential Memorandum.

\* \* \*

**19-03-10. Delegated Authority to Revise TVA’s Large Generator Interconnection Procedures**

The Board adopted the following resolution as recommended in a memorandum from the Executive Vice President and Chief Operating Officer, dated July 12, 2019, and filed with the records of the Board as Exhibit 8/22/19L:

WHEREAS generation developers and owners seek to interconnect large generation projects (those in excess of 20 megawatts) to the TVA transmission system; and

WHEREAS TVA has standard large generator interconnection procedures (LGIP) and model agreements for studying and addressing the interconnection of such generation projects; and

WHEREAS the Board of Directors (Board) in 2006 authorized the Chief Executive Officer (CEO) to make minor, incidental changes to TVA’s LGIP as necessary to align with changes the Federal Energy Regulatory Commission (FERC) makes to its *pro-forma* large generator interconnection process for jurisdictional utilities, to the extent consistent with Board policy and the TVA Act; and

WHEREAS, the Board delegated the authority to negotiate, execute, administer, and amend large generator interconnection agreements to the CEO on May 5, 2016; and

WHEREAS a memorandum from the Executive Vice President and Chief Operating Officer, dated July 12, 2019 (the “Memorandum”), a copy of which is filed with the records of the Board as Exhibit 8/22/19L, recommended that the Board delegate to the CEO the authority to administer and amend the LGIP as described in the Memorandum;

BE IT RESOLVED that after review of said Memorandum, the Board finds it to be appropriate and in the interest of TVA, and hereby delegates the authority to administer and amend the LGIP to the CEO as described in the Memorandum and consistent with approved Board policies.

\* \* \*

**19-03-11. Report of the External Relations Committee**

Director Howorth, Chair of the Committee, reported the Committee met on August 1. During the meeting the Committee received a progress report on TVA’s transparency review. Director Howorth stated the Committee is pleased to see that TVA is making changes to enhance its public engagement, added that the Committee encourages the public to take advantage of

existing opportunities to provide input, and stated the Committee asks that management continue its benchmarking effort and implement best practices as they do so. The Committee also received a written report on TVA's federal advisory committees' activities and advice, as well as updates on customer relations, external communications, and TVA's management of coal combustion residuals. Director Howorth stated the Committee understands that TVA leadership is focused on listening to and addressing the concerns of the public, regulators, elected officials, and other key stakeholders.

\* \* \*

**19-03-12. Report of the Audit, Risk, and Regulation Committee**

Director Ryder, Chair of the Committee, reported the Committee met on July 31 and had two action items for the Board. Director Ryder then introduced and moved for a vote on Minute Item 19-03-13. Following the vote on Minute Item 19-03-13, Director Ryder introduced and moved for a vote on Minute Item 19-03-14.

Following the vote on Minute Item 19-03-14, Director Ryder reported that at the Committee's July meeting management reported a local power company's request for a rate design allowing for a residential demand charge and an energy rate reduction, the result of which would be revenue neutral for residential customers while improving the alignment of rates with cost. Director Ryder stated the Committee supports management's recommendation to grant that request.

Director Ryder stated that during the July meeting management also provided an update on enterprise risk, including a review of TVA's fraud risk management activities. The Committee also reviewed TVA's quarterly 10-Q report to the Securities and Exchange Commission (SEC) and received a briefing from TVA staff on the report. In addition, the Committee received an independent assessment of TVA's financial reporting process from its external auditor, Ernst & Young (EY). Director Ryder stated that, in association with TVA's upcoming annual filing of its 10-K report with the SEC, TVA is required to state whether there is a financial expert on the Committee. At its July meeting the Committee determined that Director Thompson will remain as the Committee's designated financial expert, and this will be noted in TVA's upcoming 10-K filing.

Director Ryder reported that at its meeting the Committee also received a report and presentation from EY on cybersecurity, which is consistently ranked as one of TVA's most significant risks. Director Ryder stated that TVA works continuously to protect its critical infrastructure and information assets by applying advanced technology, conducting external audits, and leveraging federal and industry resources. He then reported that the Committee has requested that management provide quarterly reports on cybersecurity threats and management's efforts to deal with those threats.

Director Ryder reported that the Committee met in an executive session with the Deputy Inspector General and her staff and TVA's external auditor, each of which provides independent oversight and support to the Committee in carrying out its responsibilities. Several written documents were also provided to the Committee, including an annual update on distributor



regulation, reports on regulatory and operational assurance, TVA's Disclosure Control Committee minutes, and a quarterly report on local power company rates.

\* \* \*

**19-03-13. FY2020 External Auditor Selection**

The Board adopted the following resolution as recommended in a memorandum from the Chair of the Audit, Risk, and Regulation Committee, dated July 31, 2019, and filed with the records of the Board as Exhibit 8/22/19M:

WHEREAS in a July 31, 2019, memorandum to the TVA Board, the Audit, Risk, and Regulation Committee recommended, in consultation with the Inspector General, that the TVA Board approve engaging Ernst & Young LLP ("EY") as TVA's external auditor for fiscal year 2020;

BE IT RESOLVED, that the TVA Board hereby approves engaging EY as TVA's external auditor for fiscal year 2020.

\* \* \*

**19-03-14. Local Power Company Investment for Commercial Broadband**

The Board adopted the following resolution as recommended in a memorandum from the Vice President, Government Relations, dated July 16, 2019, and filed with the records of the Board as Exhibit 8/22/19N:

WHEREAS TVA recognizes that broadband connectivity is fundamental for economic development, innovation, and improved quality of life and, as such, the potential economic development benefits conferred on the electric system by the provision of commercial broadband justify an LPC funding commercial broadband services (Commercial Broadband Venture) under certain circumstances and with certain restrictions; and

WHEREAS because the wholesale power contract between TVA and each LPC requires electric system revenues and assets to be used for the benefit of the electric system and its consumers, LPCs currently may only use such revenue and assets to fund the portion of the fiber optic network directly related to the electric system operations, but LPCs may not fund the portion related to the Commercial Broadband Venture; and

WHEREAS the TVA Board approved the Use of Revenues Guidelines on April 18, 2013, for carrying out the provisions of the wholesale power contract relating to the use of electric system revenues; and

WHEREAS a memorandum from the Vice President of Government Relations, dated July 16, 2019 (Memorandum), a copy of which is filed with the records of the Board as Exhibit 8/22/19N, recommends that the Board of Directors 1) approve an amendment to the Use of Revenues Guidelines to recognize that a) an LPC investment for commercial broadband is a permitted use of electric system revenues and assets and b) that such investment is not inconsistent with section 1(a) of the Schedule of Terms and Conditions of the wholesale power contract, as described in the Memorandum, 2) and direct the President and Chief Executive Officer, or that officer's designee, to develop and implement a process designed to ensure that LPC investments for commercial broadband a) are consistent with TVA's regulatory framework, b) do not result in subsidization by electric system operations, and c) any such investments will be fully repaid to the electric system, and 3) authorize and direct the Vice President, Pricing and Contracts, or that officer's designee, to enter into agreements to authorize appropriate LPC investments for commercial broadband that are otherwise consistent with TVA's regulatory framework.

BE IT RESOLVED that after review of said Memorandum, the Board of Directors finds it to be appropriate and in the interest of TVA to approve the amended Use of Revenues Guidelines, attached to and described in the Memorandum.

RESOLVED further, that the Board hereby authorizes and directs the President and Chief Executive Officer, or that officer's designee, to develop and implement a process designed to ensure that LPC investments for commercial broadband are consistent with TVA's regulatory framework, do not result in subsidization by electric system operations, and any such investments will be fully repaid to the electric system, as further described in the Memorandum.

RESOLVED further, that the Board hereby authorizes and directs the Vice President, Pricing and Contracts, or that officer's designee, to enter into agreements to authorize appropriate LPC investments for commercial broadband that are otherwise consistent with TVA's regulatory framework.

RESOLVED further, that approval by the Board of Directors of each action described above is contingent upon the satisfactory completion of any environmental reviews determined to be required by federal law.

\* \* \*

**19-03-15. Report of the People and Performance Committee**

Director Lodge, Chair of the Committee, reported the Committee met on August 1. Director Lodge then requested and received a report from John Thomas, Executive Vice President and Chief Financial Officer, regarding Minute Items 19-03-16 and 19-03-17.

Following the votes on Minute Items 19-03-16 and 19-03-17, Director Lodge introduced, briefly discussed, and moved for a vote on Minute Item 19-03-18.

Following the vote on Minute Item 19-03-18, Director Lodge reported that the Committee received updates from management on TVA's retirement system, reviewed the independence of the Committee's compensation consultant, and discussed the Committee's work plan for the remainder of the year. The Committee also reviewed an early draft of the compensation discussion and analysis disclosed as part of TVA's annual 10-K report to be filed with the SEC later in the year.

\* \* \*

**19-03-16. Winning Performance Incentive Plan and Executive Annual Incentive Plan Corporate Multiplier Performance Measures and Goals for FY2020**

The Board adopted the following resolution as recommended in a memorandum from the President and Chief Executive Officer, dated July 22, 2019, and filed with the records of the Board as Exhibit 8/22/19O:

WHEREAS in a memorandum dated July 22, 2019, a copy of which is filed with the records of the Board as Exhibit 8/22/19O (Memorandum), the Chief Executive Officer (CEO) recommended approval of measures and goals to assess performance for purposes of the Corporate Multiplier under the Winning Performance Team Incentive Plan (WPTIP) and Executive Annual Incentive Plan (EAIP) for FY 2020; and

WHEREAS the People and Performance Committee has reviewed the Corporate Multiplier performance measures and goals for FY 2020, as described above, and recommends their approval;

BE IT RESOLVED, That the Board approves the WPTIP and EAIP Corporate Multiplier performance measures and goals for FY 2020 as set out in the Memorandum and its attachments;

RESOLVED further, That the Board hereby authorizes and directs the CEO to set and approve the Enterprise performance measures and goals for FY 2020 to be used with the Corporate Multiplier in determining incentive awards under the WPTIP and EAIP.

\* \* \*

**19-03-17. Long-Term Incentive Plan Measures and Goals**

The Board adopted the following resolution as recommended in a memorandum from the President and Chief Executive Officer, dated August 9, 2019, and filed with the records of the Board as Exhibit 8/22/19P:

WHEREAS in a memorandum dated August 9, 2019, a copy of which is filed with the records of the Board as Exhibit 8/22/19P (Memorandum), the Chief Executive Officer (CEO) recommended approval of the following Long-Term Incentive Plan (LTIP) performance measures for the FY 2020 – FY 2022 performance cycle: Non-Fuel Delivered Cost of Power, Load Not Served, INPO Index and External Measures; and

WHEREAS the People and Performance Committee has reviewed the proposed LTIP measures, as described above, and related goals, and recommends their approval;

BE IT RESOLVED, That, with regard to LTIP measures and goals for the performance cycle of FY 2020 - FY 2022, the Board approves the Non-Fuel Delivered Cost of Power, Load Not Served, INPO Index and External Measures metrics and goals (including accompanying definition sheets) as set forth in the Memorandum and Attachment A thereto.

\* \* \*

**19-03-18. TVA Compensation Plan Amendment**

The Board adopted the following resolution as recommended in a memorandum from the Chair, People and Performance Committee, dated August 1, 2019, and filed with the records of the Board as Exhibit 8/22/19Q:

WHEREAS Section 2(g)(1)(F) of the TVA Act, as amended, states that the Board shall establish a compensation plan for employees of the Corporation; and

WHEREAS the Charter of the Board's People and Performance Committee (Committee), as approved by the Board on February 11, 2016, states that the Committee shall review such a compensation plan and make recommendations to the full Board for revisions; and

WHEREAS the Committee has reviewed, with its independent consultant (Frederic W. Cook & Co., Inc.), the TVA Compensation Plan approved by the Board in 2007 and amended by the Board in 2016 and, in a memorandum dated August 1, 2019, a copy of which is filed with the records of the Board as Exhibit 8/22/19Q (Memorandum), recommends approval of an amended and restated TVA Compensation Plan;

BE IT RESOLVED, That the Board hereby approves the amended and restated TVA Compensation Plan recommended by the Committee, as set out in the Memorandum and its attachments.

\* \* \*

**19-03-19. Report of the Nuclear Oversight Committee**

Director Smith, Chair of the Committee, reported the Committee met on July 18 at Watts Bar Nuclear Plant. During the meeting TVA's Senior Vice President and Chief Nuclear Officer, Tim Rausch, provided a report on overall fleet performance as well as a status on all current initiatives, important issues, and recent events. The initiatives discussed are designed to strengthen TVA's nuclear safety culture, promote leadership, and improve all aspects of nuclear fleet performance. Management also updated the Committee on plans to foster a strong culture of continuous improvement intended to create a learning organization with a high level of

employee engagement that will contribute to the nuclear fleet's achievement and maintenance of top performance. Director Smith reported the Committee was provided an in-depth review of TVA's strategy to increase the nuclear fleet's unit capability factor, a measure of whether the units in TVA's nuclear fleet are operating when they should be operating. Director Smith indicated there is room for improvement in this area, and stated that Mr. Rausch and his team have formulated a plan the Committee will be actively monitoring to ensure that TVA continues to move toward a higher level of performance on this issue.

Director Smith reported that Committee members and Mr. Lyash also visited one of the training centers at Watts Bar where they met with the licensed control room operating crew, had an opportunity to observe the simulation of an event that could occur in the reactor, and spoke with the crew about their impressions regarding plant operations. At this point Director Smith invited comments from his fellow Committee members. Director Allen responded by commending Mr. Rausch and his team and stating he is impressed with the direction of their efforts. Director Allen noted that while improvement is needed in the nuclear fleet, Mr. Rausch and his team are on a firm path that will take the fleet where it needs to go in the next year. Director Frazier agreed with Director Allen's assessment.

At this point Director Smith discussed the Committee's focus on first line supervisors at TVA's nuclear plants, and the importance of these individuals being aligned and prepared to do their job because they set the culture for the nuclear workforce. Director Smith stated the Committee has been working with Mr. Rausch and his team to understand what initiatives are being undertaken to address this area of concern, and during their July 18 meeting the Committee received a report from Mr. Rausch on this issue. Mr. Rausch also provided information on

changes implemented in the Employee Concerns Program to improve its effectiveness, and Director Smith noted the Nuclear Regulatory Commission (NRC) has a deep interest in that program.

\* \* \*

Following the completion of the Report of the Nuclear Oversight Committee, Chair Thompson indicated his desire to incorporate Director Kilbride into the Board's committee structure, presented a proposed, revised roster of Board Committee assignments for consideration, then moved for a vote on the revised Board Committee roster.

\* \* \*

### **19-03-20. Board Committee Appointments**

The Board adopted the following resolution:

WHEREAS Section 2(g)(1) of the TVA Act requires that the Board create and maintain an "audit committee" and directs the Board to create such other committees of Board members as the Board considers to be appropriate; and

WHEREAS Section 2.1 of the Bylaws further provides that appointees for the membership of committees shall be submitted by the Chair of the Board to the Board for its approval as a single slate of appointees; and

WHEREAS the Chair hereby recommends the following slate of committee members:

#### **Audit, Risk, and Regulation Committee**

John Ryder, Chair  
Kenny Allen  
Gina Lodge  
Skip Thompson

#### **Nuclear Oversight Committee**

Jeff Smith, Chair  
Kenny Allen  
A.D. Frazier  
Bill Kilbride

**External Relations Committee**

Richard Howorth, Chair  
A.D. Frazier  
John Ryder  
Jeff Smith

**People and Performance Committee**

Gina Lodge, Chair  
Kenny Allen, Chair-Elect  
Skip Thompson  
Ron Walter

**Finance, Rates, and Portfolio Committee**

Ron Walter, Chair  
A.D. Frazier, Chair-Elect  
Richard Howorth  
Bill Kilbride

BE IT RESOLVED, That the Board of Directors hereby approves the slate of committee members as recommended by the Chair, with said assignments to continue in place as provided in the Bylaws or until modified by further action of the Board.

\* \* \*

**Information Items**

**19-03-21. Gallatin Settlement**

As recommended in a confidential application for Notational Board Approval, a copy of which is filed with the records of the Board as Exhibit 08/22/19R, and in accordance with the TVA Board Practice, Notational Approvals, on May 31, 2019, the individual Board members approved (i) a delegation of authority to the Chief Executive Officer (CEO) to approve a negotiated resolution of the environmental enforcement action brought against TVA by the State of Tennessee, which was subsequently joined by intervening plaintiffs Tennessee Clean Water Network and Tennessee Scenic Rivers, alleging violation of Tennessee environmental laws and regulations at Gallatin Fossil Plant, and (ii) authorization to the General Counsel, or designee, to execute the CEO-approved Consent Order and Commissioner's Order.

\* \* \*

The meeting was adjourned at 12:13 p.m. (EDT).