



**Board Meeting Agenda
Thursday, September 21, 2023
Noon**

Call to Order

Roll Call

Approval of Minutes

Official Action

Resolution 1483 – A Resolution Authorizing the Execution of the Power Supply Expanded Flexibility Agreement with the Tennessee Valley Authority

President's Report

Other Business

Public Comments

Adjournment

Note: The Chair may declare a periodic recess in these proceedings as may be necessary for comfort or convenience.



September 15, 2023

Knoxville Utilities Board
445 S. Gay Street
Knoxville, Tennessee 37902-1109

Commissioners:

The September 21 Board meeting agenda includes a single official action item, authorizing the execution of the Power Supply Expanded Flexibility Agreement with the Tennessee Valley Authority (TVA).

In accordance with the terms of its Long-Term Partnership Agreements with local power companies in the Valley, TVA has developed a Power Supply Expanded Flexibility Program, which allows for a Valley Partner, such as KUB, to deploy certain energy resources to produce its own power in a total capacity not to exceed the greater 5% of its electric energy requirements or 1 MW. For KUB, this 5% flexibility amount is currently equivalent to 81 MW of electric energy.

Permitted energy resources include solar based generating resources of any type, natural gas power generating resources of any type, wind turbine generation, and other carbon-free or carbon-neutral facilities as approved by TVA, with such energy resources to be located within TVA's service territory and connected to a Valley Partner's distribution system or TVA's transmission system.

The cost of the energy resource generation will displace the demand and energy charges TVA would have otherwise charged to KUB, with the objective of producing power cost savings for KUB and its customers.

Resolution 1483 authorizes the execution of the Power Supply Expanded Flexibility Agreement with TVA. I recommend its approval on first and final reading.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gabriel Bolas". The signature is written in a cursive, flowing style.

Gabriel J. Bolas II
President and CEO

RESOLUTION NO. 1483

A Resolution Authorizing the Execution of the Power Supply Expanded Flexibility Agreement with the Tennessee Valley Authority

Whereas, Knoxville Utilities Board (“KUB”) purchases its electric power requirements for resale from the Tennessee Valley Authority (“TVA”) pursuant to its Long-Term Partnership Agreement (“Power Contract”) with TVA executed on March 12, 2020; and

Whereas, in accordance with the Power Contract, TVA has developed a Power Supply Expanded Flexibility Program, which allows KUB (and other Valley Partners) to deploy certain Energy Resources to produce its own power in a total capacity amount not to exceed the greater of 5% of its energy (average hourly capacity usage over a five-year period) or 1 MW; and

Whereas, KUB currently has the flexibility to generate up to 81 MW of electric energy by deploying Energy Resources; and

Whereas, Energy Resources must meet criteria defined by the Power Supply Expanded Flexibility Agreement, including solar based generating resources of any type, natural gas power generating resources of any type, wind turbine generation, and other carbon-free or carbon-neutral facilities consistent with TVA’s Integrated Resource Plan; and

Whereas, among other things, an Energy Resource must be located within TVA’s service territory and connect to a Valley Partner’s distribution system or TVA’s transmission system; and

Whereas, Energy Resource generation will displace the demand and energy usage that TVA would have otherwise charged to Distributor under the Power Contract; and

Whereas, the Board has determined, upon recommendation from KUB staff, that it is in the best interest of KUB, its customers, and the community to participate in TVA’s Power Supply Expanded Flexibility Program and enter into the Power Supply Expanded Flexibility Agreement with TVA.

Now, Therefore, Be It Hereby Resolved by the Board of Commissioners of the Knoxville Utilities Board:

Section 1. The President and Chief Executive Officer (CEO) is hereby authorized to execute the Power Supply Expanded Flexibility Agreement with TVA in substantially the form attached hereto this Resolution as Exhibit A, with only such changes as approved by the President and CEO.

Section 2. The President and CEO is further authorized and empowered generally to take such actions and to authorize such other persons to take such actions as may be necessary, proper, or convenient to carry out the terms of the Power Supply Expanded Flexibility Agreement with TVA and to participate in TVA's Power Supply Expanded Flexibility Program.

Section 3. That this Resolution shall take effect from and after its passage.

Tyvi Small, Vice Chair

Mark Walker, Board Secretary

APPROVED ON 1st
& FINAL READING: _____
EFFECTIVE DATE: _____
MINUTE BOOK 46 PAGE _____

POWER SUPPLY EXPANDED FLEXIBILITY AGREEMENT

TV-75110A, Supp. No. ____

This Power Supply Expanded Flexibility Agreement (“**Agreement**”) is between KNOXVILLE UTILITIES BOARD (Acting for and on behalf of the City of Knoxville, Tennessee) (“**Distributor**”), a Tennessee municipal corporation, and TENNESSEE VALLEY AUTHORITY (“**TVA**”), a corporate agency and instrumentality of the United States of America, created and existing under and by virtue of the Tennessee Valley Authority Act of 1933, as amended.

Distributor purchases its power requirements from TVA for resale under contract number TV-75110A, effective July 1, 1988, as amended (“**Power Contract**”).

The parties entered into the Long-Term Agreement, Supplement 114 to the Power Contract, effective March 12, 2020 (“**LTA**”), covering arrangements to increase the length and strength of the contractual relationship of the parties to help ensure the long-term success of the public power model.

The parties want to enter into this Agreement to expand the opportunities under which Distributor may Deploy Energy Resources in order to further strengthen the public power model.

Therefore, the parties agree as follows:

SECTION 1 - DEFINITIONS

In accordance with the terms and conditions of this Agreement and any attachments hereto, the following definitions apply:

“**Aggregated Energy Resource**” means an Energy Resource that receives a contribution from two or more Subscribed Valley Partners of all, or a portion of, each Subscribed Valley Partner’s Enhanced Flexibility Volume.

“**Deploy(ed)(ment)**” means the providing of power from an Energy Resource to any electric distribution or transmission system, or providing any other financial, economic, or capacity benefits from an Energy Resource to a Valley Partner or a third party. Expansion of capacity of any previously approved Energy Resource is also considered Deployment.

“**Energy Resource**” means, as approved by TVA and subject to Section 4 below, (i) a facility that Distributor receives generation or equivalent benefit from, either through ownership, a PPA, or a contract for benefits, and (ii) which produces electric energy, or stores electric energy produced by another Energy Resource, while operating in parallel with or interconnected to a Valley Partner’s distribution system or TVA’s transmission system.

“**Enhanced Flexibility Volume**” means the total capacity allocated to or contributed by Distributor for all Energy Resources, including Aggregated Energy Resources and Legacy Energy Resources. Where Distributor owns or contracts, through a PPA, for the output of an Energy Resource, that amount will be “allocated to” Distributor. Where Distributor contracts to receive benefits from an Energy Resource equivalent to a portion of its maximum permitted Enhanced Flexibility Volume, that capacity amount will be treated as “contributed by” Distributor.

“**Enhanced Flexibility Volume Cap**” is defined in subsection 5.1.

“**Environmental Attributes**” means an aspect, claim, characteristic, or benefit associated with the use of a quantity of energy generated by an approved Energy Resource and that is capable of being measured, verified, or calculated. Environmental Attributes do not include: (a) federal, state, or local tax credits or other similar incentives; or (b) any avoided adverse wildlife or environmental impacts or avoided emissions of pollutants to the environment.

“Environmental Attribute Reporting Rights” means the exclusive right of a purchaser of Environmental Attributes to report ownership of those Environmental Attributes that it purchases, in compliance with federal or state law if applicable, to federal or state agencies or to other parties at such purchaser’s discretion, and includes the right to report under Section 1605(b) of the Energy Policy Act of 1992, or under any present or future domestic, international, or foreign emissions or environmental commodity trading program.

“Excess Generation” means any power and energy delivered to TVA from Distributor when output generated by an Energy Resource exceeds the load, at any interval, at the wholesale delivery point where the Energy Resource is interconnected and may flow onto the TVA transmission system.

“Initiation Notice Form” or **“INF”** means the form submitted by Distributor to TVA for the programmatic approval of a facility that may become an Energy Resource.

“Integrated Resource Plan” or **“IRP”** means TVA’s Integrated Resource Plan or comparable successor integrated resource plan.

“Legacy Energy Resource” means any Energy Resource that was approved by TVA through an Initiation Notice Form prior to the effective date of this Agreement. Unless otherwise provided for in this Agreement, Legacy Energy Resources will be administered and managed in accordance with the terms and conditions of this Agreement.

“Metering Requirements” is defined in subsection 4.6.

“Power Purchase Agreement” or **“PPA”** means a power purchase or similar agreement. A PPA may be between Distributor and the developer/owner of an Energy Resource or between Distributor and TVA.

“Program Guidelines” is defined in Section 2.

“Qualifying Facility” or **“QF”** is defined under the Public Utility Regulatory Policies Act (**“PURPA”**) and, for the purposes of this Agreement, means a facility sited within TVA’s service territory that Distributor purchases energy from, which produces electric energy, or stores electric energy produced by another Energy Resource, while operating in parallel with the TVA transmission system.

“Renewable Energy Certificates” or **“RECs”** means all the Environmental Attributes, as defined in this Agreement, associated with the generation of one (1) MWh of energy from an Energy Resource, and the reporting rights, title, and interest in and to such Environmental Attributes set forth in Section 7 hereof.

“Subscribed Valley Partner” means a Valley Partner with contractual rights to receive benefits from an Aggregated Energy Resource consistent with the Valley Partner’s contribution of all or a portion of its Enhanced Flexibility Volume to such Energy Resource.

“Technology Factor” means the factor assigned to each eligible Energy Resource used for the purpose of calculating an Energy Resource’s contribution to Distributor’s Enhanced Flexibility Volume.

“Valley Partner” means any distributor of TVA power that has an effective LTA and either a Prior Agreement or a Power Supply Expanded Flexibility Agreement with TVA. Distributor is a Valley Partner for the purposes of this Agreement.

SECTION 2 - INCORPORATION OF ATTACHMENTS

The parties agree that the Power Supply Expanded Flexibility Guidelines (“**Program Guidelines**”), as they may be amended from time to time, are attached to and made a part of this Agreement. TVA may amend the Program Guidelines, in part or in whole, from time to time. In the event of any conflict between the body of this Agreement and the Program Guidelines, this Agreement controls.

SECTION 3 - TERM AND TERMINATION

3.1 - Term

Except as provided below, this Agreement remains effective until the earlier of:

- a) the termination of the Power Contract;
- b) the 20th anniversary of the date on which the LTA terminates;
- c) the 20th anniversary of the date of Distributor’s written notice to TVA to terminate the Power Contract; or
- d) the 20th anniversary of the date of TVA’s notice under subsection 9.5.

3.2 - Lock-Out Period

Distributor will not expand any Energy Resources, will not increase the capacity of any Energy Resources, and will not initiate any new Energy Resources for operation during the term of the Power Contract, upon the occurrence of any of the following:

- a) the date Distributor provides written notice to terminate the Power Contract,
- b) termination of the LTA,
- c) the date of TVA’s notice to Distributor under subsection 9.5,
- d) the date Distributor’s Enhanced Flexibility Volume equals or exceeds Distributor’s Enhanced Flexibility Volume Cap, or
- e) when Distributor sells, transfers, retires, or otherwise makes claims with regard to a REC or Environmental Attribute in a manner that violates or is inconsistent with this Agreement or the Program Guidelines.

3.3 - Early Termination

Any time prior to termination of this Agreement under subsection 3.1, but after the provisions of subsections 3.2(a), (b), (c) or (d) become applicable, TVA shall have the right to terminate this Agreement to be effective upon 30 days’ prior written notice to Distributor at any time that Distributor has no in-service Energy Resources.

SECTION 4 - ENERGY RESOURCES

4.1 - Eligibility

Distributor may Deploy only the following types of power generation as an Energy Resource, in accordance with the terms and conditions of this Agreement:

- a) solar-based power generating resources of any type, including those integrated with batteries;
- b) natural gas power generating resources of any type, including those integrated with batteries;
- c) wind turbine generation, including those integrated with batteries;
- d) a Legacy Energy Resource, so long as the Legacy Energy Resource continues to be operated in accordance with the terms and conditions of the Initiation Notice Form at the time of the Legacy Energy Resource's approval; and
- e) as approved by TVA, other carbon-free or carbon-neutral facilities that TVA deems to be consistent with TVA's IRP.

4.2 - Addition and Removal

- a) Effective immediately upon providing notice in accordance with subsection 10.5, TVA may, in its sole discretion as it deems to be consistent with its IRP, add to or remove from the list of eligible Energy Resources in subsection 4.1.
- b) Any Energy Resource documented by an Initiation Notice Form approved by TVA prior to the effective date of a removal by TVA will not be subject to that removal notice.

4.3 - PURPA Purchase

To preserve this Agreement, TVA will assist Distributor in purchasing energy from a QF to facilitate compliance with TVA rules, regulations, and participation in renewable energy programs, including the Dispersed Power Production ("**DPP**") Program. Distributor must comply with any guidance TVA provides regarding any purchases from QFs. A contract between a QF and Distributor will be designated as an Energy Resource and applied against the Enhanced Flexibility Volume unless (i) Distributor compensates the QF at a rate no higher than TVA's applicable avoided cost rate for power, (ii) the power is assigned or conveyed to TVA by Distributor, and (iii) the power is accepted by TVA.

4.4 - Siting and Sizing

Each Energy Resource must:

- a) connect to a Valley Partner's distribution system (which includes behind the Distributor-customer's meter) or TVA's transmission system;
- b) be located within TVA's service territory;
- c) provide or distribute electrical output to the interconnected Valley Partner or TVA;
- d) limit generation to its TVA-approved alternating current nameplate rating; and
- e) adhere to any further requirements in the Program Guidelines.

4.5 - Management

In the planning, development, construction, financing, operation, and maintenance of an Energy Resource, Distributor must comply with the Program Guidelines, all applicable laws, and accepted industry standards, including, but not limited to, the then-current versions of IEEE 1547, IEEE 2800, and UL 1741. Deployment of any Energy Resource will be at Distributor's expense.

For any Energy Resource with Deployment at or above 25 MVA, or that requires TVA to install protective devices (e.g., transfer trip), Distributor and TVA will enter into a parallel operation agreement for that specific Energy Resource. TVA may, at its sole discretion, require protective devices and/or a parallel operation agreement for Energy Resources Deploying under 25 MVA.

4.6 - Metering

Distributor must meter each Energy Resource in a manner consistent with the requirements, standards, and guidance set forth in TVA's Metering Requirements for Generation, Physical Tie Lines, Pseudo-ties, and Dynamic Schedules procedure ("**Metering Requirements**"), as they may be updated and changed from time to time.

TVA may update or change the Metering Requirements upon not less than 30 days' notice to Distributor. When TVA makes such updates or changes, or at any time upon Distributor's request, TVA will provide the revised Metering Requirements to Distributor in accordance with subsection 10.5.

4.7 - Reporting and Recordkeeping

In the manner specified in the Program Guidelines, Distributor must submit to TVA the required information regarding Deployment, the capacity allocations, and the equivalent benefit allocations for any Energy Resource to which Distributor has a contractual connection.

SECTION 5 - ENHANCED FLEXIBILITY VOLUME

5.1 - Calculations

Distributor's Enhanced Flexibility Volume, as allowed and calculated by TVA, must not exceed the greater of either:

- a) 5% of Distributor's energy, where energy is its average hourly capacity usage, initially over TVA fiscal years 2015 through 2019, as calculated by TVA; or
- b) 1 MW.

The foregoing limit is referred to herein as Distributor's "**Enhanced Flexibility Volume Cap**".

For an Aggregated Energy Resource, Distributor's share, if any, of that facility's capacity or equivalent benefits that Distributor is entitled to receive because of Distributor's contribution to the Energy Resource shall be included in its Enhanced Flexibility Volume, as calculated and approved by TVA.

5.2 - Recalculations

Upon written request, Distributor may request TVA recalculate its energy usage according to subsection 5.1, using the most recent five consecutive TVA-fiscal-year periods immediately prior to the date of the request.

The recalculated energy amount will apply only if it is greater than Distributor's current Enhanced Flexibility Volume Cap. Recalculations will not be used to decrease Distributor's Enhanced Flexibility Volume Cap.

5.3 - Enhanced Flexibility Volume Aggregation

Valley Partners must have an effective Power Supply Expanded Flexibility Agreement with TVA in order to Subscribe to any Energy Resource Deployed under this Agreement. Total capacity Deployed by an Energy Resource must not exceed the aggregated total Enhanced Flexibility Volume allocated and contributed to the Energy Resource from all Subscribed Valley Partners, in accordance with this Agreement and the Program Guidelines.

If TVA issues a notice of violation of this Section 5 notifying Distributor that it has failed to account for, failed to allocate for, or failed to attribute any Enhanced Flexibility Volume contributed by a Subscribed Valley Partner, Distributor will cease the operation of the Energy Resource or permanently adjust the alternating current nameplate rating of an Energy Resource under its control (or for which it has a PPA). Once TVA, in its sole discretion, is satisfied that the alternating current nameplate rating of the Energy Resource is in compliance with the allocations to and contributions from each Subscribed Valley Partner, in accordance with this Agreement, TVA will notify Distributor that such violation has been resolved.

5.4 - Technology Factor

For the purpose of calculating an Energy Resource's contribution to Distributor's Enhanced Flexibility Volume, the facility's alternating current nameplate rating will be multiplied by its Technology Factor.

TVA will approve and assign a Technology Factor to an Energy Resource in accordance with this Agreement and the Program Guidelines.

A Legacy Energy Resource will retain the Technology Factor assigned to it at the time its Initiation Notice Form was approved, so long as it continues to be operated in accordance with the terms and conditions of the Initiation Notice Form at the time of its approval.

SECTION 6 - PRICING AND CREDITING STRUCTURE

For an amount up to Distributor's Enhanced Flexibility Volume Cap, Energy Resources will either (a) displace demand and energy usage that TVA would have otherwise generated, delivered, and charged on Distributor's monthly wholesale power invoice, or (b) be treated in accordance with a wholesale crediting mechanism in accordance with the Program Guidelines and any associated PPA or similar agreement.

The pricing structure against which demand and energy will be displaced is under the wholesale power rate schedule applicable under Distributor's Power Contract.

Nothing in this Agreement authorizes Distributor to exceed the Enhanced Flexibility Volume Cap. In the event Distributor's Enhanced Flexibility Volume exceeds its Enhanced Flexibility Volume Cap, in addition to other remedies available to TVA, TVA may adjust its monthly wholesale power invoice to account for the Energy Resource generation that exceeds Distributor's Enhanced Flexibility Volume Cap.

Nothing in this Agreement preempts TVA's authority to set rates consistent with the TVA Act.

For an Energy Resource where Excess Generation flows onto the TVA transmission system at a specific delivery point, TVA will credit Distributor per the terms and conditions outlined in the associated PPA or similar agreement with TVA.

SECTION 7 - RENEWABLE ENERGY CERTIFICATES

7.1 - REC Requirements

Distributor must document and attest that all REC transactions – sales, transfers, and retirements – represent energy consumed within the TVA service area, and Distributor will make no claims based upon those RECs for energy consumed outside of the TVA service area.

Distributor may sell, transfer, or retire RECs only to its end-use electric system customers, either individually or collectively, or to other Valley Partners. Distributor will ensure that its end-use customers do not resell or transfer RECs sold to them by Distributor.

RECs must only be retired on behalf of Distributor, its end-use customers, the Valley Partner that purchased or received a transfer of the RECs, or the receiving Valley Partner's end-use customers.

If Distributor sells, transfers, or retires a REC in a manner that violates this Agreement and/or the Program Guidelines, or makes claims, statements, or communications regarding a REC that is inconsistent with this Agreement and/or the Program Guidelines, and does not correct the violation or inconsistent claim within 15 business days of written notice from TVA of the violation or inconsistent claim, then TVA by separate written notice, will notify Distributor that (1) it has failed to comply with the terms and conditions of this Agreement and/or the Program Guidelines, including subsection 3.2(e), and (2) subsection 3.2 is now applicable. TVA, by further written notice, will notify Distributor if and when such violation or inconsistency with subsection 3.2(e) has been resolved to TVA's satisfaction and sole discretion and upon what date the Lock-Out Period has or will end.

7.2 - REC Communications

All RECs retired may be referenced by TVA in its public communications concerning renewable energy resources used to serve the load of TVA's customers. In TVA's reporting of its system and system greenhouse gas emissions, TVA will be entitled to report, as a separate line item or items, greenhouse gas emission reductions (and any other emissions reductions and/or avoidances) attributable to the substitution of renewable energy sources for fossil based, non-renewable, or nuclear based sources in TVA's service area as a result of the commitments made under this Agreement.

Distributor and TVA will each be entitled to include in their public communications that (i) participation in the power supply flexibility allowed by TVA and the creation of RECs in connection with this Agreement caused, in whole or in part, the addition of Energy Resources to TVA's service territory; and (ii) RECs generated and retired from renewable energy from such facilities represent energy consumed within the TVA service area. Distributor or Distributor's assignees shall make no claims based upon those RECs for energy consumed outside of the TVA service area.

SECTION 8 - WHOLESALE POWER SUPPLY

Except as specifically stated in the LTA and in this Agreement, Distributor remains obligated under the Power Contract to take from TVA the electric power Distributor requires to serve its customers, and any other sale or supply of power not supplied by TVA is prohibited. However, consistent with the LTA, power received or supplied by Distributor as part of and in compliance with the terms and conditions of this Agreement is not an event of default as specified in the subsection entitled "Events of Default and Remedies" in Section 3 of the LTA.

In accordance with the Power Contract, TVA remains obligated to make every reasonable effort to be in a position to supply Distributor's total customer load, without regard to Distributor's Deployment of Energy Resources under this Agreement.

SECTION 9 - CURTAILMENTS

9.1 - Curtailment Rights

If Distributor has Deployed an aggregate amount of at least 5 MW of Energy Resource capacity in its service territory, and if TVA determines, in its sole discretion, that a safety or reliability emergency exists, then TVA will have the right to order Distributor to curtail its Energy Resource utilization by ceasing all Energy Resource power production from all Energy Resources of 1 MW or greater.

9.2 - Curtailment Obligations

Distributor must cease all power production from any Energy Resource of 1 MW or greater within 15 minutes after TVA provides notification in accordance with subsection 9.3 that an emergency condition exists. TVA will promptly notify Distributor when the emergency condition has ended, at which time Distributor may resume power production at all Energy Resources.

9.3 - Notice to Curtail

TVA will notify Distributor of its curtailment obligations under subsection 9.2 by phone using the Primary Notice Phone Number below. If TVA does not reach anyone at the Primary Notice Phone Number, TVA also may provide notices, without obligation, to any Alternate Notice Phone Number(s) Distributor provides.

Distributor's Primary Notice Phone Number	865-558-2210
Distributor's Alternate Notice Phone Number(s)	865-584-8990 865-558-2660

9.4 - Failure to Curtail

If Distributor fails to curtail power production at any Energy Resource in accordance with subsection 9.2, then TVA, by written notice, may notify Distributor that it must cease all further power production from each Energy Resource specified in TVA's notice.

Effective immediately upon such notice from TVA, Distributor will cease all further power production from the Energy Resource specified by TVA until such time that Distributor receives written notification from TVA that Distributor has demonstrated, to TVA's satisfaction, that it will meet its curtailment obligations.

9.5 - Failure to Comply

Notice of Failure to Comply: If Distributor does not comply with the requirements in subsection 9.4, then TVA may notify Distributor that (1) it has failed to comply with this Section 9, and (2) subsections 3.1(d) and 3.2(c) now apply.

SECTION 10 - MISCELLANEOUS

10.1 - Responsibility to Consumers

In incurring expenditures with regard to an Energy Resource, Distributor is responsible for maintaining low rates, protecting the financial viability of its distribution system, and ensuring the non-discriminatory treatment of its electric consumers in a manner consistent with the Power Contract and TVA's regulatory framework.

10.2 - Conflicts

Any inconsistency in terms and conditions and/or the obligations of the parties will be resolved by giving precedence in the following order: (1) this Agreement, (2) Program Guidelines, (3) Energy Resource contracts between Valley Partners, and (4) other related contracts and documents. In any PPA between Distributor and the developer/owner of an Energy Resource, Distributor will include provisions that (i) ensure Distributor is able to fulfill its obligations under this Agreement and the Program Guidelines, (ii) require the developer/owner to follow the Program Guidelines, and (iii) provide that the Program Guidelines control in the event of a conflict between the PPA and the Program Guidelines.

10.3 - Exceptions

Distributor may request exceptions or alternatives to the requirements set forth in this Agreement. TVA may accept or reject such request at its sole discretion. Approval of any requests will be implemented by an amendment to this Agreement, or by separate agreement.

10.4 - Legal Compliance

The parties will conduct all activities under this Agreement, the Program Guidelines, any PPA or similar agreement, and any agreements related to or required under this Agreement or the Program Guidelines in compliance with the Power Contract, prevailing TVA power acquisition practices and applicable law, including without limitation, least cost planning requirements, the TVA Act, and the National Environmental Policy Act, and all laws, rules, regulations, and state or local approvals applicable to the parties' respective obligations under this Agreement. Distributor will cooperate with TVA in TVA's conduct of environmental and other reviews, including adhering to any TVA requests that no ground-disturbing activity takes place with regard to an Energy Resource until TVA's reviews are satisfactorily completed.

Distributor will comply with the terms set forth in any Energy Resource contracts entered into with other Valley Partners, provided such compliance does not conflict with the obligations of Distributor under its Power Contract or this Agreement.

10.5 - Notice

Any notice required under this Agreement will be deemed to be given properly if delivered in writing by one of the following delivery methods: (1) posted on a website designated for delivery of Energy Resource information; (2) e-mailed to Distributor's General Manager, Superintendent, Chief Executive Officer, or equivalent management representative; or (3) emailed to the designated contact below, in accordance with the attached Program Guidelines.

To Distributor: Senior Vice President and CFO
mark.walker@kub.org
and
Vice President, Operations
john.gresham@kub.org

TVA: Manager, Renewable Programs
flexibility@tva.gov

Distributor may change either the designation of any person or the email address of any such person at any time and from time to time by similar notice.

10.6 - Submittal of Required Information

Unless otherwise provided for herein, any schedule, form, report, or other documentation required by this Agreement or the Program Guidelines must be submitted by Distributor to flexibility@tva.gov.

If emailing flexibility@tva.gov, the Distributor is requested to also copy Distributor’s assigned TVA Regional Relations Representative on the email.

10.7 - Liability

With the exception of the express obligations to Distributor that TVA has assumed under this Agreement, TVA has no liability to any Valley Partner or third party in relation to any Energy Resource, and any related agreements, contractual or otherwise, between Valley Partners and/or third parties.

10.8 - TVA Transmission System

Nothing in this Agreement shall be interpreted or construed to authorize Distributor to use any TVA transmission facilities or any part of TVA’s transmission system to receive or deliver the generation output of any Energy Resource.

SECTION 11 - RATIFICATION

The parties hereby ratify and confirm that: (a) TVA’s obligations under subsection 2(e) of the LTA has previously been satisfied, and (b) the Power Contract, as amended by both this Agreement and the LTA, is their continuing obligation.

The effective date of this Agreement is the date of TVA’s signature.

KNOXVILLE UTILITIES BOARD
(Acting for and on behalf
of the City of Knoxville)

By _____

Title: _____

Date: _____

TENNESSEE VALLEY AUTHORITY

By _____

Director
Power Customer Contracts

Power Supply Expanded Flexibility Program Guidelines

Tennessee Valley Authority (TVA)

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IMPLEMENTATION OF A POWER SUPPLY EXPANDED FLEXIBILITY OPTION MAY HAVE IMPACTS ON EXISTING PRODUCTS OR PROGRAMS FROM TVA THAT ARE BASED ON A VALLEY PARTNER'S DEMAND AND ENERGY TAKINGS.

ANY ACTIONS TAKEN BY A PARTY IN RELIANCE ON THE TERMS SET FORTH IN THESE PROGRAM GUIDELINES, PROGRAM FORMS, OR ON STATEMENTS MADE DURING NEGOTIATIONS OR DISCUSSIONS PURSUANT TO THE SUBJECT MATTER HEREIN SHALL BE AT SUCH PARTY'S OWN RISK. UNTIL DEFINITIVE AGREEMENT(S) HAVE BEEN EXECUTED BETWEEN OR AMONG THE PARTIES, NO PARTY SHALL HAVE ANY LEGAL OBLIGATIONS, EXPRESS OR IMPLIED, OR ARISING IN ANY OTHER MANNER UNDER THESE PROGRAM GUIDELINES, PROGRAM FORMS, OR IN THE COURSE OF NEGOTIATION OR DISCUSSIONS. SUCH DEFINITIVE AGREEMENT(S) ARE THE ONLY DOCUMENT(S) THAT WOULD CREATE A BINDING LEGAL OBLIGATION BETWEEN OR AMONG THE PARTIES WITH RESPECT TO THE SUBJECT MATTER HEREIN.

General Terms and Conditions

Program Guidelines

- These Program Guidelines are intended to provide Valley Partners with a framework of various project options by which each Valley Partner may find more opportunity to utilize their Enhanced Flexibility Volume through the Deployment of Energy Resources using the following options.
- Capitalized Terms used in these Program Guidelines have the same meaning as in the Power Supply Expanded Flexibility Agreement (“Agreement”). In the event of any conflict between the body of the Agreement and these Program Guidelines, the Agreement controls.
- TVA may amend these Program Guidelines at any time, in part or in whole, by posting such amendments under “Flexibility Option - General Information” on the Valley Connect Programs page at <https://valleyconnect.tva.gov/resources/programs>, or such successor website as TVA may designate from time to time. Such amendments will be effective upon 30 days’ written notice in accordance with the Agreement and will not apply to any Energy Resource documented by an Initiation Notice Form (“INF”) approved by TVA in accordance with these Program Guidelines prior to the effective date of such amendments. This paragraph does not apply to any adjustments made to the price per kWh stated in the Crediting and Pricing Structure section of these Program Guidelines.
- Terms and conditions in these Program Guidelines are in addition to and made a part of the Agreement.

Authorization and Participation

- The Agreement is available only to local power companies that have an effective Long-Term Agreement (“LTA”) with TVA (“Valley Partners”) and will be an amendment to the Valley Partner’s wholesale power contract (“Power Contract”).
- Implementation of Expanded Flexibility will be in accordance with the TVA Board Approval dated August 31, 2022.

Energy Resources

Eligibility

- No Energy Resource may be Deployed until it has been approved by TVA in accordance with the Agreement and these Program Guidelines.
- No expansion of the capacity of an Energy Resource may occur without the prior written approval of TVA.
- TVA may reject any Energy Resource, in whole or in part, if, in TVA's sole discretion, it deems that the Energy Resource poses a potential safety risk or adverse impact to a transmission or distribution system.

Requirements

- TVA, in its sole discretion, at any time during the approval process or while the Energy Resource is Deployed, may require, at a Valley Partner's cost, one or more of the following for an Energy Resource facility in order to determine any adverse impacts to TVA's transmission system, what transmission equipment and/or network upgrades are required, what Excess Generation TVA may be able to take onto its transmission system, and other factors and requirements for safe operation and Deployment of an Energy Resource:
 - "Facilities Study" means a formal scoping process by TVA using other studies (including the System Impact Study) and information to produce the necessary project drawings, detailed cost estimates, and work schedule for the Deployment of a potential Energy Resource facility.
 - "Flexibility Device Kit" means TVA's preferred communication link for acquiring generation data from Energy Resources (if other existing communication links are not available), which includes a cell router, GPS clock, AC-DC converter, and TVA implementation support.
 - "System Impact Study" means an engineering study completed by TVA to identify the impact and any scope of work necessary for the safety and reliability of TVA's transmission system and for the interconnection of an Energy Resource to TVA's transmission system or Valley Partner's distribution system.
 - "Transmission Screen" means a study performed by TVA to determine the appropriate load sizing for a potential Energy Resource at a given delivery point, including but not limited to metering, protection, and visibility requirements.
- "Interconnection Requirements" means the latest version of TVA's Energy Supply Facility Interconnection Requirements and Procedures, with which all Energy Resources must comply, and as applicable the North American Electric Reliability Corporation (NERC) registration requirements.
- "Commissioning Requirements" means the latest version of TVA's Commissioning Checklist and Guidelines. An Energy Resource at or above 25 MVA will be subject to the full Commissioning Requirements and, in TVA's sole discretion, an Energy Resource with Deployment below 25 MVA may require full or partial compliance with the Commissioning Requirements.
- "Modeling Requirements" means the latest version of TVA's Modeling Requirements for Synchronous Generators and Inverter-Based Resources. An Energy Resource at or above 25 MVA will be subject to the full Modeling Requirements and, in TVA's sole discretion, an Energy Resource with Deployment below 25 MVA may require full or partial compliance with the Modeling Requirements.

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- An Energy Resource at or above 25 MVA must comply with TVA's Operating Procedures and deliver to TVA forecasting information, including but not limited to, a daily projected output schedule and other forecasting information TVA may reasonably require.
 - If TVA identifies, at any time during the approval process or while the Energy Resource is Deployed, any adverse impacts on TVA's transmission system that will be caused by a Valley Partner's planned Energy Resource(s), TVA will notify the Valley Partner of the protection equipment and actions necessary to remediate such adverse impact. The Valley Partner will coordinate with TVA for the installation of any such necessary equipment and actions and reimburse TVA for TVA's equipment costs.
 - In TVA's sole discretion, TVA-owned meter(s) may be required for the Deployment and continued operation of an Energy Resource. The Valley Partner must reimburse TVA for TVA's costs in procuring and installing such meter(s) in accordance with the Metering Requirements.
 - Valley Partners are responsible for metering and communication devices for its Energy Resources to ensure TVA operational reliability in accordance with the Program Guidelines, and are required to provide TVA with unrestricted remote access to metering data at all times, and physical access to the metering facilities for the purpose of confirming remotely accessed data, during such time periods that TVA specifies, and in cooperation with the Host Valley Partner's operating representatives.

Technology Factors

- Technology Factors will be assigned to Energy Resources as follows:
 - 0.2 - for solar-based power generating Energy Resources with an alternating current nameplate rating of less than 250 kW and in compliance with the End-Use Customer Hosted Option Guidelines;
 - 0.4 - for solar-based power generating Energy Resources not included in the End-Use Customer Hosted Option;
 - 1.0 for Energy Resources that are not solar based; and
 - as calculated, in TVA's sole discretion, for other Energy Resources not included in the categories above.
- Technology Factor examples:
 - A solar-based power generating Energy Resource in compliance with the End-Use Customer Hosted Option guidelines that has an alternating current nameplate rating of 250 kW; equals $250 \text{ kW} \times 0.2 = 50 \text{ kW}$ of Enhanced Flexibility Volume.
 - A solar-based power generating Energy Resource has an alternating current nameplate rating of 10 MW; equals $10 \text{ MW} \times 0.4 = 4 \text{ MW}$ of Enhanced Flexibility Volume.
 - A combined heat and power facility has a nameplate rating of 5 MW; equals $5 \text{ MW} \times 1.0 = 5 \text{ MW}$ of Enhanced Flexibility Volume.
- In accordance with the Agreement, a Legacy Energy Resource will retain the Technology Factor assigned to it at the time its INF was approved, so long as the Legacy Energy Resource continues to be operated in accordance with the terms and conditions of the INF at the time of its approval.

Energy Resource Aggregation

- Valley Partners may “aggregate” all or a portion of Enhanced Flexibility Volumes into a single Aggregated Energy Resource, so long as:
 - the total capacity Deployed by the Energy Resource does not exceed the aggregated total Enhanced Flexibility Volume allocated and contributed to the Energy Resource from all Subscribed Valley Partners, in accordance with the Agreement and these Program Guidelines; and
 - each individual Valley Partner’s Enhanced Flexibility Volume does not exceed the Enhanced Flexibility Volume Cap as allowed, calculated, and assigned by TVA to each individual distributor.

Crediting and Pricing Structure

Energy Resources will either (a) displace demand and energy usage that TVA would have otherwise generated, delivered, and charged on Distributor's monthly wholesale power invoice or (b) be treated in accordance with a wholesale crediting mechanism in accordance with the following:

Flexibility Option Power Purchase Agreement ("FOPPA"):

- For solar Energy Resources directly interconnected to TVA's transmission system, TVA will purchase exclusive rights and title to 100% of the energy output from the Valley Partner who has a PPA with the developer or owner of the Energy Resource.
- For all energy delivered to and purchased by TVA at the delivery point, TVA will pay the Valley Partner \$50.52 per MWh plus the Standard Service Total Monthly Fuel Cost ("TMFC") rates for the billing month.
- Specific payment terms, metering requirements, and contract price provisions are defined in the FOPPA.
- For any conflict between these Program Guidelines and the FOPPA, the FOPPA governs.

Excess Option Power Purchase Agreement ("EOPPA"):

- For solar Energy Resources directly interconnected to a Valley Partner's distribution system; the Valley Partner will offset demand and energy usage otherwise generated, delivered, and charged by TVA.
- For any solar generation in excess of load at a delivery point that causes energy to flow onto the TVA transmission system at any interval, TVA will purchase exclusive rights and title to any such energy from the Valley Partner who has a PPA with the developer or owner of the Energy Resource.
- For all energy delivered to and purchased by TVA at the delivery point, TVA will pay the Valley Partner \$31.28 per MWh plus the Standard Service Total Monthly Fuel Cost ("TMFC") rates for the billing month.
- Specific payment terms, metering requirements, and contract price provisions are defined in the EOPPA.
- For any conflict between these Program Guidelines and the EOPPA, the EOPPA governs.

Other

- The provisions in these Program Guidelines applicable to the FOPPA and EOPPA apply to Energy Resources for which a Valley Partner has executed a PPA.
- The FOPPA and EOPPA rates apply exclusively to solar-based power generating Energy Resources and may be adjusted by TVA consistent with changes, increase or decrease, to Standard Service Wholesale rate changes and adjustments.
- TVA will notify Valley Partners of any such adjustment, and the effective date of the adjustment, either (1) in accordance with section 10.5 of the Agreement, or (2) in the fuel cost adjustment Statement of Amounts.
- These Program Guidelines do not limit TVA's right to change or replace its formula to determine price per kWh.
- For non-solar-based Energy Resources, upon request from a Valley Partner, TVA will calculate a separate technology-specific rate.

Valley Partner Hosted Option Guidelines

These Valley Partner Hosted Option Guidelines establish the processes and procedures to be followed by Valley Partners and TVA for the implementation of a Valley Partner Hosted Energy Resource (“VP Project”). A VP Project is an Energy Resource that is directly connected to a Valley Partner’s distribution system for Deployment on that Valley Partner’s system, may include Excess Generation that flows onto TVA’s transmission system that TVA purchases from Valley Partner, and/or may be an Aggregated Energy Resource. Valley Partners should read and understand all the terms and conditions set forth in the Agreement and these Program Guidelines.

Participation Requirements

Valley Partner(s) must, in accordance with the Agreement, these Program Guidelines, and in any forms or instructions, as they may be requested, required, and updated from time to time by TVA:

- submit a completed INF describing participation in the Valley Partner Hosted Option;
- maintain responsibility for, and all costs associated with, the planning (including environmental reviews), development, Deployment, continued operation, and ceasing operation of the VP Project;
- comply with all standards, guidelines, reporting and data obligations;
- as applicable, execute a PPA with the project developer or owner for the Deployment and operation of the VP Project and continually maintain such effective agreement while the VP Project is Deployed;
- take title to all Environmental Attributes, capacity-equivalent benefits, and other project attributes associated with the Valley Partner’s Enhanced Flexibility Volume contribution or allocation to the VP Project;
- manage, sell, transfer, and retire the RECs generated by the VP Project consistent with the Agreement, and provide attestation to such;
- maintain responsibility for the negotiation, preparation, execution, completion, implementation, and ongoing administration of the PPA and all other agreements associated with the planning, development, Deployment, continued operation, and ceasing operation of the VP Project;
- as applicable, in TVA’s sole discretion, enter into any other agreements (e.g., Interconnection Agreement and/or Parallel Operation Agreement) required for the initial and continued safe Deployment of an Energy Resource;
- implement curtailment requirements; and
- as applicable, enter into an EOPPA with TVA for any Excess Generation that flows from the VP Project onto the TVA transmission system.

Aggregated Energy Resource Requirements

Host Valley Partner:

- “Host Valley Partner” means the Valley Partner in whose service territory a VP Project is located and directly connected to that Valley Partner’s distribution system. The Host Valley Partner may also be a Subscribed Valley Partner for the VP Project.

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- The Host Valley Partner must take physical delivery of and title to all energy output from the VP Project, along with taking title to all Environmental Attributes and other project attributes;
 - The Host Valley Partner, as applicable, must enter into and administer a mutually agreeable contractual agreement with each Subscribed Valley Partner outlining the allocation of equivalent benefits, sale or transfer of Environmental Attributes and/or RECs, and any other details related to the planning, implementation, Deployment, continued operation, and ceasing operation of the VP Project;
 - The Host Valley Partner must certify on the INF, subject to TVA approval, the manner in which all financial and environmental benefits will be allocated to Subscribed Valley Partners;
 - The Host Valley Partner is responsible for Energy Resource Administration and may receive a financial or other benefit (“Host Fee”) from other Subscribed Valley Partners as compensation for the time and cost it incurs to complete its Host Valley Partner functions associated with Energy Resource Administration of the VP Project. The Host Valley Partner and all other Subscribed Valley Partners must mutually agree in writing to the Host Fee.
 - Energy Resource Administration includes but is not limited to: the planning, development, Deployment, continued management and operation, and ceasing operations of the VP Project; PPA management; REC management and retirement; administration of allocating the financial and environmental benefits to all Subscribed Valley Partners; metering, transmission, and billing obligations; and any other administrative and operational activities associated with the VP Project.
 - **Enhanced Flexibility Volume Considerations:**
 - A Valley Partner that has reached its Enhanced Flexibility Volume Cap may still act as a Host Valley Partner for a VP Project in accordance with the following:
 - the Host Valley Partner and all Subscribed Valley Partners mutually agree in writing to a Host Fee as described in these Program Guidelines;
 - the Host Valley Partner does not receive any benefits that exceed the Host Fee.
 - A Valley Partner that has remaining Enhanced Flexibility Volume may act as Host Valley Partner for a VP Project with or without receiving a capacity allocation or equivalent benefit from the VP Project and must indicate and certify such election on the INF.

TVA Interconnected Option Guidelines

These additional TVA Interconnected Option Guidelines establish the processes and procedures to be followed by a Valley Partner and TVA for the implementation of a TVA Interconnected Energy Resource (“Interconnected Project”). The Valley Partner should read and understand all the terms and conditions set forth in the Agreement and these Program Guidelines.

Participation Requirements

- **The Valley Partner(s) must**, in accordance with the Agreement, these Program Guidelines, and in any forms or instructions, as they may be requested, required, and updated from time to time by TVA:
 - submit a completed INF describing participation in the TVA Interconnected Option;
 - comply with all standards, guidelines, reporting and data obligations, and other requirements and responsibilities;
 - follow the TVA interconnection procedures and standards in effect at the time of interconnection; and
 - execute a separate PPA with TVA, substantially in the form of the FOPPA (an example of which may be provided by TVA at the request of a Valley Partner), for TVA’s purchase and title to all energy output delivered from the Interconnected Project onto the TVA transmission system, resulting in TVA taking physical delivery of all energy output delivered from the Interconnected Project;
 - maintain responsibility for, and all costs associated with, the planning, development, Deployment, continued operation, and ceasing operation of the Interconnection Project, including the negotiation, preparation, execution, implementation, and ongoing administration of a PPA with project developer or owner, and all other agreements associated with the planning, development, Deployment, continued operation, and ceasing operation of the Interconnected Project;
 - take all right, title, and interest in and to energy output, Environmental Attributes, and other project attributes generated under a PPA entered into between the Valley Partner and the project developer or owner;
 - A PPA between the Valley Partner and project developer or owner must:
 - (1) be entered into between the Valley Partner and project developer or owner;
 - (2) confer to the Valley Partner any and all right, title, and interest in and to energy output, Environmental Attributes, and other project attributes generated under a PPA;
 - (3) require Continuous Reactive Power Support (“CRPS”): CRPS is a local grid voltage control service provided by the Interconnected Project’s solar inverters during periods when the Interconnected Project is not generating power but is able to receive power from TVA;
 - (4) ensure that no construction activities are initiated at the Interconnected Project site, whether by the Valley Partner, the project developer or owner, or any third party, until TVA has provided written notice to the Valley Partner that TVA’s environmental reviews have been satisfactorily completed;
 - (5) allow for TVA to require the project developer or owner to effect a curtailment or disconnection of the Interconnected Project, in accordance with the Interconnection Agreement with TVA;

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- (6) at the Valley Partner's expense, ensure that by no later than the date the project generates and delivers power to the TVA transmission system, an automatic generation control (AGC) system for the Interconnected Project is installed in accordance with TVA's specifications and direction;
 - (7) require the project developer or owner adhere to the then current Program Guidelines in effect at the time the PPA was entered into to the extent applicable, and state that in the event of a conflict between the PPA and such Program Guidelines, the Program Guidelines controls;
 - (8) require, in TVA's sole discretion, the execution of any necessary agreements (e.g., Interconnection Agreement) and other necessary documentation between the project developer or owner and TVA or the Valley Partner, as applicable to address metering, operation, maintenance, and other related matters; and
 - (9) include other such terms and conditions as TVA may reasonably require.
- **TVA will** execute a separate agreement with the Valley Partner, substantially in the form of a FOPPA (an example of which may be provided by TVA at the request of a Valley Partner), for TVA's purchase and title to all energy output delivered to the TVA transmission system resulting in TVA taking physical delivery of the energy output from the Interconnected Project.

Process Requirements

- **PPA Administration:**
 - Administration of a PPA will be the responsibility of the Valley Partner and must be in accordance with these Program Guidelines and the requirements of the PPA between TVA and the Valley Partner. This may include, but is not limited to, negotiations, exercising contractual rights under a PPA, milestone determinations and extensions, enforcement of remedies for non-performance, and pricing increases.
- **Aggregated Projects:**
 - More than one Valley Partner may subscribe to a TVA Interconnected Project, and may enter into a separate PPA with the project developer or owner for receiving an allocation of capacity from the Energy Resource, so long as all Subscribed Valley Partners individually enter into a PPA with TVA for TVA's purchase of and title to all energy output delivered from the Interconnected Project to the TVA transmission system. All energy output must be sold to TVA.

End-Use Customer Option Guidelines

These additional End-Use Customer Hosted Guidelines establish the processes and procedures to be followed by a Valley Partner and TVA for the implementation of the End-Use Customer Hosted Option (“EUC Option” or “EUC Program”). The Valley Partner should read and understand all the terms and conditions set forth in the Agreement and these Program Guidelines.

A Valley Partner may implement an EUC Program only within its service territory for the solar installations of its eligible Standard Service electric system customers, and it will have the responsibilities of a Host Valley Partner.

A Valley Partner’s receipt and purchase of electric energy from such solar installations will be counted as capacity towards the Valley Partner’s Enhanced Flexibility Volume Cap, as allowed and calculated by TVA, using the applicable Technology Factor.

Defined Terms

- “Participant” means any potentially eligible Standard Service electric system customer located and served in a Valley Partner’s service territory that elects to participate in such Valley Partner’s EUC Program.
- “Metering Installation” means meters and related facilities used to determine the amounts of electric energy flowing onto the Valley Partner’s distribution system from solar installations. TVA assumes no responsibility for the adequacy or functionality of any Metering Installation. In addition, the Metering Installation must meet the following requirements:
 - adhere to TVA’s reporting requirements and TVA’s Commercial Energy Solutions Net Metering Policy, as it may be updated from time to time by TVA;
 - conform to applicable industry standards; and
 - be for Valley Partner’s exclusive use and control unless otherwise agreed to in writing by the Participant and Valley Partner.
- “Site” means a Participant’s eligible residential, commercial, or industrial real estate and associated personal property to which the solar installation is connected. In addition, the Site must meet and maintain the following requirements:
 - The property must be located in the service territory of, and receive its retail electricity distribution services from, the Valley Partner at the location of the solar installation;
 - The primary purpose of the solar installation must be to serve the load at Participant’s premises, not primarily for energy generation sales. For example, participant may not be an entity whose main business purpose is energy generation and sales;
 - The solar installation must be located on the same premises of Participant, where the Participant’s own electrical load is located;
 - A maximum of 250 kW per Standard Service customer of Valley Partner is permitted;
 - electric energy delivered to and purchased by the Valley Partner does not exceed more than 100% of the Participant’s annual electrical usage (the aggregate of all billing meters on Participant’s contiguous property at the Site); and

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- Participant and the solar installation must meet the requirements set forth herein.

Participation Requirements

- The Valley Partner is responsible for EUC program planning, development, enrollment, reporting, and administration consistent with the Agreement and these Program Guidelines. As a condition of the Valley Partner offering an EUC program, the Valley Partner must also agree to administer and manage DPP in its service area.
- The Valley Partner must:
 - submit the Expanded Flexibility End-Use Customer Program Approval Form for TVA's approval of its EUC Program;
 - submit monthly and annual reports as required by the Agreement and these Program Guidelines, and any further information reasonably requested by TVA that, in TVA's sole discretion, is needed to approve and regulate the potential EUC Program;
 - assume and maintain responsibility for certain retail facing administration obligations for current and future Dispersed Power Production (DPP) Program participants;
 - at Participant's expense, in Valley Partner's sole discretion, provide and install Metering Installation necessary to measure electrical output from the solar installation;
 - at Participant's expense, test, calibrate, operate, maintain, and, if necessary, replace the meter(s) in the Metering Installation;
 - at no cost to TVA, enter into a separate Interconnection Agreement with Participant to provide (1) a delivery point at the Site for electric energy to flow onto the Valley Partner's distribution system, (2) the Valley Partner with monthly readings from the Metering Installation, and (3) the necessary access rights in order to perform such readings. Connection of Participant's Site to the Valley Partner's distribution system shall be subject to the Rules and Regulations of the Valley Partner;
 - properly meter and account for all electric energy the Valley Partner receives and purchases, in accordance with the Agreement and these Program Guidelines;
 - the solar installation conforms to applicable industry standards or utilizes a contractor certified through TVA's Green Connect quality contractor network for the solar installation;
 - as applicable, in TVA's sole discretion, at Valley Partner's sole expense, enter into a separate metering agreement with TVA and install necessary metering and equipment; and
 - ensure that:
 - Participant's primary purpose for participating in the EUC Program is not energy generation;
 - Participant's system is an on-site solar photovoltaic ("PV") installation or solar PV with battery storage installation ("solar installation");
 - the solar installation has an alternating current nameplate rating of 250 kW or less;

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- the solar installation is owned or leased by a Standard Service customer of Valley Partner, as designated by the customer's power billing account that is associated with the billing meter at the address of the on-site solar installation;
 - as applicable, at Participant's sole expense, Participant receives the local building code official's inspection and certification of the solar installation and Metering Installation and submits such documentation to the Valley Partner showing that the solar installation and Metering Installation is permitted, approved, and meets all electrical and mechanical qualifications; and
 - electric energy received and purchased by the Valley Partner do not exceed more than 100% of each Participant's annual electrical usage (the aggregate of all billing meters on Participant's contiguous property at the Site).
- TVA will:
 - Provide the Valley Partner with the End Use Customer Program Approval Form for submittal to TVA and for EUC Program approval;
 - Ensure the EUC Program adheres to TVA's Net Metering Standard, as amended or superseded, and TVA's Commercial Energy Solutions Net Metering Policy, as amended or superseded;
 - Transition DPP retail facing program administration to the Valley Partner. TVA and Valley Partner will collaborate to develop a change management plan for administration, billing, and other program obligations. Valley Partner will submit such change management plan to TVA.

Pricing Structure

- TVA will determine EUC Program pricing structures consistent with the following parameters:
 - Must be a bundled energy purchase inclusive of the environmental and emission free attributes (e.g., RECs).
 - Manage and retire environmental and emission free attributes consistent with the Agreement and these Program Guidelines.
 - Purchase price must not exceed Standard Service wholesale pricing as received by the Valley Partner from TVA.

Required Forms

Valley Partner must report to TVA the following information regarding Energy Resources, using the appropriate form and frequency, both of which TVA will specify.

Initiation Notice Form

An “Initiation Notice Form” or “INF” is required during the early planning stages of Energy Resource facility development, but in all cases no later than 90 days prior to any new Energy Resource power production. The INF keeps TVA apprised of Energy Resource development within the Host Valley Partner’s service territory, expediting TVA’s affected system interconnection studies, which TVA will conduct in a timely manner (TVA must review and provide advance, written approval of any plans to modify or operate an Energy Resource that materially differs from the Host Valley Partner’s original proposal to build such Energy Resource).

Operational Notice Form

The “Operational Notice Form” is required prior to any Energy Resource facility power production. The Operational Notice Form notifies TVA of an Energy Resource project that is capable of and ready to generate energy and provide power, consistent with the Agreement and these Program Guidelines, along with providing TVA with relevant information about such projects, including but not limited to location, type, size, inverter data, transformer data, and other metering and interconnection information.

Monthly Reporting Form

The “Monthly Reporting Form” is required on a schedule specified by TVA, which captures the (i) Host Valley Partner’s hourly meter data for Energy Resources every month, with projects over 1 MW individually delineated, and (ii) allocates Enhanced Flexibility Volume for all Subscribed Valley Partners, if any.

Annual Reporting Form

“Annual Reporting,” is required on a schedule specified by TVA, which includes all information TVA requires for its transmission planning and load forecasting, including but not limited to Energy Resource generation forecasts, size, and type of projects being considered in the coming year, and timing of those projects.

End-Use Customer Program Approval Form

An “End-Use Customer Program Approval Form” or “PAF” is required during the early planning stages of the EUC Program, but in all cases no later than 90 days prior to a Valley Partner launching its EUC Program. The PAF provides programmatic details to ensure adherence to TVA’s Net Metering Standard and transition of DPP retail facing program administration to the Valley Partner.

Additional Forms and Information

TVA, by written notice, may require additional forms and information from Valley Partners for the administration, compliance, and continued implementation of the Agreement, these Program Guidelines, and any Energy Resource.

**Knoxville Utilities Board
Board Meeting Minutes
Thursday, August 17, 2023 Noon**

Call to Order

The Knoxville Utilities Board met in regular session in the Larry A. Fleming Board Room at 445 S. Gay Street, on Thursday, August 17, 2023, pursuant to the public notice published in the January 7, 2023, edition of the *News Sentinel*. Chair Simpson-Brown called the meeting to order at 12:00 p.m.

Roll Call

Commissioners Present: Ron Feinbaum, Cynthia Gibson, Kathy Hamilton, Celeste Herbert, Adrienne Simpson-Brown, and Tyvi Small.

Commissioner Absent: Claudia Caballero

Approval of Minutes

Upon a motion by Commissioner Feinbaum and a second by Commissioner Small, the June 15, 2023 Board Meeting minutes were approved by a roll call vote. The following Commissioners voted “aye”: Feinbaum, Gibson, Hamilton, Herbert, Simpson-Brown, and Small. No Commissioner voted “nay”.

Old Business

None

New Business

Resolution 1482 – A Resolution Authorizing the Execution of a Tranche Amendment to the Knoxville Utilities Board’s (“KUB”) Green Invest Agreement with the Tennessee Valley Authority (“TVA”), Replacing a Previously Executed Tranche Amendment for the Purchase of 55 MW of New Solar Energy under the Green Invest Program

President Gabriel Bolas recognized Mark Walker, Senior Vice President and Chief Financial Officer, to present for the Board’s consideration a resolution authorizing the execution of a Tranche amendment to our Green Invest Agreement with TVA, replacing a previously executed amendment for the purchase of 55 MW of solar power.

August 17, 2023

Upon a motion by Commissioner Herbert and a second by Commissioner Gibson, Resolution 1482 (*Attachment 1*) was adopted by a roll call vote on first and final reading. The following Commissioners voted “aye”: Feinbaum, Gibson, Hamilton, Herbert, Simpson-Brown, and Small. No Commissioner voted “nay”.

President’s Report

August Storm Response

President Gabriel Bolas reminded Commissioners our community was hit hard by an EF2 tornado and severe thunderstorms recently. This was the third largest storm outage in KUB history and employees worked around the clock throughout the week to rebuild the electric infrastructure and restore power to our customers. He recognized John Williams, Senior Vice President of Engineering and Construction, to provide an overview of restoration efforts.

FY23 Organizational Performance

President Bolas advised Commissioners KUB’s fiscal year ended June 30, 2023 and touched on the year’s organizational performance. He then recognized Mark Walker, Senior Vice President and Chief Financial Officer, to provide an overview of financial and organizational performance for the fiscal year.

Community Advisory Panel Update – Federal Funding Opportunities

President Bolas advised Commissioners that KUB has been looking for grant funding opportunities to help offset the impact of inflationary pressures. He recognized Susan Edwards, Senior Vice President and Chief Administrative Officer, to share an overview of the Inflation Reduction Act (IRA) and opportunities for both KUB and its customers to benefit from various tax credits and home energy rebates through the IRA.

American Public Gas Association Awards

Ms. Edwards also shared details of two recent awards received from the American Public Gas Association. KUB was recognized with the 2022 Safety Award for the second consecutive year and the annual Communications & Marketing Award, where we placed third for natural gas growth.

TeenWork Program

President Bolas thanked Commissioners for their continued support of KUB’s TeenWork program. He recognized Janea Peterson, Educational Outreach Coordinator in Community Relations, to provide an update on the 2023 program.

August 17, 2023

Other Business

Commissioner Feinbaum announced that the Nominating Committee met today to begin this year's process for nominating candidates for the Commissioner term that begins January 1, 2024. This will be for a new Commissioner to replace Commissioner Small, whose term is expiring.

The application is available on KUB's website at www.kub.org or by calling KUB. Applications should be submitted by 12 p.m. on Thursday, September 14, 2023. Knoxville's City Charter requires that five or more candidates be nominated at the October meeting for transmittal to the Mayor for final selection and confirmation by City Council.

Public Comment

None

Adjournment

There being nothing further to come before the Board, Chair Simpson-Brown declared the Board meeting adjourned at 1:17 p.m.

Tyvi Small, Vice Chair

Mark Walker, Board Secretary

Attachments

Attachment 1	Recommendation Letter and Resolution 1482 – A Resolution Authorizing the Execution of a Tranche Amendment to the Knoxville Utilities Board's ("KUB") Green Invest Agreement with the Tennessee Valley Authority ("TVA"), Replacing a Previously Executed Tranche Amendment for the Purchase of 55 MW of New Solar Energy under the Green Invest Program	<u>Page(s)</u> 12082 – 12086
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August 11, 2023

Knoxville Utilities Board
445 S. Gay Street
Knoxville, Tennessee 37902-1109

Commissioners:

The August 17 Board meeting agenda includes a single official action item, authorizing the execution of a Tranche Amendment to our Green Invest Agreement with TVA, replacing a previously executed amendment for the purchase of 55 MW of solar power.

The Board previously approved KUB's participation in TVA's Green Invest Program, which is designed to help companies in the Valley achieve their sustainability goals by bringing new, renewable sources of electric power generation to the Valley.

KUB previously entered a series of Tranche Amendments to our Green Invest Agreement with TVA, providing for the purchase of 502 MW of new solar power generation to be developed over several years.

In October 2022, staff advised the Board that each of its Green Invest solar projects was experiencing price and schedule pressures, the result of supply chain constraints, global policies, and other economic factors. Staff recommended KUB proceed with three of the four projects, accounting for 325 MW of solar, at revised costs and in-service dates.

The Board adopted Resolution 1465 at the October 2022 meeting, authorizing the execution of two new Tranche Amendments for 270 MW of solar, replacing the previously executed agreements, with the understanding an additional Tranche Amendment for the remaining 55 MW of solar would be forthcoming.

Resolution 1482 authorizes the execution of the Tranche Amendment for 55 MW of solar. I recommend its approval on first and final reading.

Respectfully submitted,

A handwritten signature in black ink that reads "Gabriel Bolas". The signature is written in a cursive, flowing style.

Gabriel J. Bolas II
President and CEO

RESOLUTION NO. 1482

A Resolution Authorizing the Execution of a Tranche Amendment to the Knoxville Utilities Board's ("KUB") Green Invest Agreement with the Tennessee Valley Authority ("TVA"), Replacing a Previously Executed Tranche Amendment for the Purchase of 55 MW of New Solar Energy under the Green Invest Program

Whereas, the KUB Board of Commissioners ("Board") previously adopted Resolution No. 1410, which among other things, authorized KUB's participation in TVA's Green Invest Program; and

Whereas, KUB entered a series of Green Invest Tranche Amendments in March 2020 and November 2020, respectively, to purchase a total of 502 MW of new solar in the Tennessee Valley, representing four new solar development projects in the Valley; and

Whereas, the solar industry has been impacted by global policies, regulations, and other economic factors, which have resulted in supply constraints and significant price increases for critical components of solar equipment; and

Whereas, like many other solar development projects across the nation, KUB's four solar installation projects in Green Invest experienced price increases and schedule pressures; and

Whereas, the developer of each KUB solar project requested TVA and KUB provide price and time concessions to the original commitments so the projects could move forward; and

Whereas, KUB staff previously recommended to the Board KUB proceed with three of the four solar projects with revised costs and in-service dates, representing 325 MW of new solar, and the Board authorize the execution of a new series of Tranche amendments for the 325 MW; and

Whereas, the Board previously adopted Resolution No. 1465, authorizing the execution of new Tranche Amendments for 270 MW of new solar, replacing previously executed Tranche Amendments; and

Whereas, Resolution No. 1465 acknowledged a future amendment for 55 MW of new solar, which would also replace a previously executed amendment; and

Whereas, Resolution No. 1482 authorizes the execution of the new Tranche Amendment for 55 MW of new solar, and staff has determined that its execution is in the best interest of KUB and its customers.

Now, Therefore, Be it Hereby Resolved by the Board of Commissioners of the Knoxville Utilities Board:

Section 1. The President and Chief Executive Officer is hereby authorized to execute the Green Invest Tranche Amendment providing for the purchase of 55 MW of new solar, in substantially the form attached hereto this Resolution as Exhibit A, with only such changes as approved by the President and Chief Executive Officer.

Section 2. The President and Chief Executive Officer is further authorized and empowered generally to take such action and to authorize such other persons to take such actions as may be necessary, proper, or convenient to carry into effect this Resolution and to carry out the terms of the executed amendment.

Section 3. This Resolution shall take effect from and after its passage.

Adrienne Simpson-Brown/s
Adrienne Simpson-Brown Chair

Mark Walker/s
Mark Walker, Board Secretary

APPROVED ON 1st
& FINAL READING: 8-17-23
EFFECTIVE DATE: 8-17-23
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TRANCHE AMENDMENT # __

Contract No. TV-75110A, Supp. No. ____

This Green Invest Agreement Tranche Amendment (“**Amendment**”) is between KNOXVILLE UTILITIES BOARD (Acting for and on behalf of the City of Knoxville, Tennessee) (“**Distributor**”), a Tennessee municipal corporation, and TENNESSEE VALLEY AUTHORITY (“**TVA**”), a corporate agency and instrumentality of the United States of America created and existing under and by virtue of the Tennessee Valley Authority Act of 1933, as amended, and is subject to the provisions of the Green Invest Agreement, TV-75110A, Supp. No. 115 (“**Agreement**”). This Amendment is effective as of the date of TVA’s signature below.

<p>Renewable Energy Facility</p>	<p>Distributor will purchase from TVA the Product derived from the Renewable Energy Facility identified below, on an as-generated basis contingent on availability accounting for 27.5% of that Renewable Energy Facility’s total renewable generation.</p> <p>Developer: <u>SR Tullahoma LLC</u> PPA Contract Number: <u>6555561</u> Contract Output (MWac): <u>200 MW (of which 27.5% equals 55 MWac)</u> Location: <u>35°20’49.10”N, 86°16’15.88”W</u> Expected Delivery Point: <u>delivery point on the TVA Franklin-Wartrace 161-kV transmission line #2 adjacent to the site</u> Expected Initial Delivery Date: <u>June 30, 2026</u> Delivery Period (years): <u>20</u> Distributor’s Proportionate Damages Share: <u>8.54%</u></p> <p>TVA is excused from providing Product to Distributor under this Tranche Amendment if and to the extent that RECs are not generated by the Renewable Energy Facility and/or otherwise not delivered to TVA under the PPA.</p>
<p>Term</p>	<p>Subject to any earlier termination of this Amendment pursuant to the terms of the Agreement, the term of this Amendment runs until the expiration or termination of the term of the PPA.</p>
<p>Product Price</p>	<p>The Product price for generation from the applicable Renewable Energy Facility is \$3.08 per REC.</p>
<p>Renewable Energy Facility Underperformance</p>	<p>Subject to the section entitled Condition Precedent below, in the event of Renewable Energy Facility Underperformance, Distributor will be entitled to the following pursuant to Section 5.4 of the Agreement:</p> <ul style="list-style-type: none"> (a) Distributor’s Proportionate Damages Share multiplied by the total damages received by TVA in the event Developer fails to timely achieve the Initial Delivery Date in accordance with the terms of the PPA. (b) Distributor’s Proportionate Damages Share multiplied by the total of any damages received by TVA under the PPA for Renewable Energy Facility Underperformance. (c) replacement RECs for the Product shortfall in the event they are received by TVA under the PPA. (d) Distributor’s Proportionate Damages Share multiplied by any Termination Payment (as defined in the PPA) received by TVA in the event of TVA’s early termination of the PPA pursuant to Article 9, “Early Termination; Remedies”.

Early Termination	Section 7.3 of the Agreement will establish the early termination amount.
Condition Precedent	TVA's obligations to supply Distributor with Product or a share of damages or replacement RECs received under the PPA are conditioned on satisfaction of the Delivery Condition Precedent. For the avoidance of doubt, the Delivery Condition Precedent will not be deemed to occur until the first day following TVA's written approval pursuant to the PPA that all requirements necessary to achieve Notice to Proceed under the PPA have been satisfied.
General Terms and Conditions	<p><u>Ratification of the Power Contract.</u> The Power Contract, Contract No. TV-75110A, effective July 1, 1988, as amended by this Amendment, is ratified and confirmed as the continuing obligation of the parties.</p> <p><u>Defined Terms.</u> Capitalized terms not otherwise defined in this Amendment have the same meaning as in the Agreement and/or Power Contract.</p> <p><u>Conflicts.</u> In the event of any conflict between this Amendment and the Agreement, this Amendment controls.</p> <p><u>Assignment.</u> This Amendment will be binding upon and inure to the benefit of the parties and their respective successors and permitted assigns and may be assigned only in accordance with the terms of the Agreement.</p> <p><u>Amendment.</u> This Amendment may be amended only by a written agreement signed by both parties.</p> <p><u>Counterparts.</u> This Amendment may be executed in multiple counterparts, each of which will be considered an original and all of which together will be considered to be but one and the same instrument. Facsimile or PDF transmission of any signed original document, and retransmission of any facsimile or PDF transmission, will be the same as delivery of any original document.</p>
Performance Assurance	<u>Performance Assurance.</u> This Amendment will be bound and governed by Section 6 of the Agreement, which govern Distributor's Performance Assurance obligations with TVA throughout the term of this Amendment.
Previous Agreements	Contract No. TV-75110A, Supp. No. 121, is hereby terminated and replaced by this Amendment.

By signing below, the parties agree to be bound by the terms and conditions contained in this Amendment and the Agreement.

Knoxville Utilities Board (Acting for and on behalf of the City of Knoxville)	
<i>Signature:</i>	<i>Title:</i>
<i>Printed Name:</i>	<i>Date:</i>

Tennessee Valley Authority	
<i>Signature:</i>	<i>Title:</i>
<i>Printed Name:</i>	<i>Date:</i>

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