



American Electric Power Service Corporation
as agent for
Appalachian Power Company

Request for Proposals - PSA

from Qualified Bidders

Totaling up to 300 MWac of nameplate rated
Solar Energy Resources
and / or
Wind Energy Resources
(with Optional Battery Energy Storage Systems)

RFP Issued: February 15, 2021

Proposals Due: March 31, 2021

Web Address: <http://www.appalachianpower.com/rfp>

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BACKGROUND

APCo is pursuing additional wind and solar generation resources consistent with the requirements of the Virginia Clean Economy Act for a Phase I utility via three requests for proposals (RFPs) as follows:

PSA	300 MW Solar and Wind RFP via a purchase and sale agreement (PSA) for purchase of 100% equity interest in a project company.
PPA	Solar and Wind Resource RFP via one or more long-term power purchase agreements (PPAs). <u>The PPA RFP is expected to be issued at a later date in 2021.</u>
REC only	RFP for renewable energy certificates (RECs) only. <u>The REC RFP is expected to be issued at a later date in 2021.</u>

This RFP is associated with the 300 MW PSA RFP. Announcements regarding the PPA and REC only RFPs will be made via News Release and may be found at www.appalachianpower.com/rfp.

1. Introduction

American Electric Power Service Corporation (AEPSC) and Appalachian Power Company (APCo or Appalachian Power) are subsidiaries of American Electric Power Company, Inc. (AEP).

AEPSC is administering this Request for Proposals (RFP) on behalf of APCo. Affiliates of AEP and APCo (Affiliate) are permitted to participate in this RFP, and APCo reserves the right to offer one or more self-build projects.

Appalachian Power serves about 1 million customers in West Virginia, Virginia and Tennessee. Its headquarters is in Charleston, W. Va., with regulatory and external affairs offices in both Charleston, W. Va. and Richmond, Va.

Appalachian Power is part of the American Electric Power system, one of the largest electric utilities in the United States, delivering electricity to more than 5 million customers in 11 states. AEP ranks among the nation's largest generators of electricity, owning nearly 32,000 megawatts of generating capacity in the U.S. AEP also owns the nation's largest electricity transmission system, a nearly 39,000-mile network that includes more 765-kilovolt extra-high voltage transmission lines than all other U.S. transmission systems combined. AEP's transmission system directly or indirectly serves about 10 percent of the electricity demand in the Eastern Interconnection, the interconnected transmission system that covers 38 eastern and central U.S. states and eastern Canada, and approximately 11 percent of the electricity demand in ERCOT, the transmission system that covers much of Texas. AEP's utility units operate as AEP Ohio, AEP Texas, Appalachian Power (in Virginia and West Virginia), AEP Appalachian Power (in Tennessee), Indiana Michigan Power, Kentucky Power, Public Service Company of Oklahoma, and Southwestern Electric Power Company (in Arkansas, Louisiana and eastern Texas). AEP's headquarters are in Columbus, Ohio. For more information, see our corporate web site, www.aep.com.

APCo Service Territory



2. RFP Overview

- 2.1. APCo has issued this RFP to support its requirement to provide its customers with carbon-free generation, consistent in the requirements of the Virginia Clean Economy Act for a Phase I utility. APCo is required to meet annual targets that reach 100% by 2050. APCo intends to meet its obligations through a portfolio of projects utilizing different ownership models; this RFP is for facilities meeting the definition of renewable energy contained in Section 56-585.5.A of the Code that are to be acquired by the utility at their mechanical completion date.
- 2.2. APCo is requesting Proposals that will result in obtaining up to 300 MW of nameplate rated Solar and/or Wind Energy Resources (Solar Project, Wind Project, Project). Depending on the results of the RFP, the Company may pursue additional resources beyond 300 MW. The minimum nameplate rated bid size for this RFP is 50 MWac.
- 2.3. A Proposal for a solar or wind energy resource (Base Proposal) is required by Bidders to participate in this RFP. Bidders may include an alternate Proposal for a solar or wind energy resource with a battery energy storage system (BESS Option). Standalone BESS proposals will not be accepted in this RFP.
- 2.4. The Resources requested via this RFP will be acquired via Purchase and Sale Agreements (PSA) for purchase of 100% of the equity interest of the Project's limited liability company (Project LLC) at Mechanical Completion¹ for solar projects and on or about completion for wind projects. APCo will not consider proposals in this RFP

¹ Mechanical Completion means the Project has been mechanically completed, assembled, erected and installed in accordance with the terms and conditions of the PSA.

that do not meet these criteria. Proposals for “PPAs” or “REC only” products should be submitted separately into the Company’s future RFPs (see “Background,” page 1.)

- 2.5. APCo is seeking Wind Projects that will qualify for the Federal Production Tax Credit (PTC), and Solar Projects that will qualify for the Federal Investment Tax Credit. While qualifying for these Federal Tax Credits is not an Eligibility and Threshold Requirement (§8.1) for participating in the RFP, the value brought to the Proposals in buying down the cost of energy by utilization of these tax credits is significant, and is included in the Company’s Economic Analysis (§8.2) and ranking of each of the respective Proposals.
- 2.6. Affiliates of AEP and APCo (Affiliate) may participate in this RFP.
- 2.7. Appropriate RFP procedures and a Code of Conduct Policy are in place to safeguard against APCo Affiliates from receiving preferential or discriminatory treatment or preferential access to information.
- 2.8. If Affiliate proposals are offered, they will (i) be submitted in the same format and under the same rules, (ii) be evaluated in the same manner, and (iii) use the same Form PSA (Appendix E) as a basis for contract negotiations as all other Proposals submitted into this RFP.
- 2.9. APCo may execute one or more Solar and/or Wind Project PSAs as a result of this RFP.
- 2.10. Any Project(s) with which APCo moves forward as a result of this RFP will be subject to APCo’s receipt of the necessary regulatory approvals. If the Project is domiciled in Virginia, APCo will seek a prudency determination at the Virginia State Corporation Commission consistent with §56.585.1:4.H of the Code of Virginia and Commission precedent.
- 2.11. All questions regarding this RFP should be emailed to:

APCoRenewableRFP2021@aep.com

APCo will post a list of the non-confidential “Questions and Answers” on its RFP website <http://www.appalachianpower.com/rfp> on a weekly basis following the issuance of the RFP until the Proposal Due Date.

- 2.12. This RFP is not a commitment by the Company to acquire any Project and it does not bind the Company or its Affiliates in any manner. The Company in its sole discretion will determine which Bidders, if any, it wishes to engage in negotiations with that may lead to definitive agreements for the acquisition of one or more selected Projects.

3. Product Description and Requirements

- 3.1. Completed Project: Each Project must be a complete, commercially operable, integrated solar or wind powered electric generating plant, including all facilities that are necessary to generate and deliver energy into PJM (PJM Interconnection L.L.C) by the Expected Commercial Operation Date.
- 3.2. Expected Commercial Operation Date (COD): The Company is pursuing Projects that can achieve an Expected Commercial Operation Date (COD) by 12/15/2023; however, will consider Proposals with alternate target CODs of 12/15/2024.
- 3.3. Size: The APCo RFP is seeking up to 300 MWac nameplate rated Solar and/or Wind generation resources. The minimum acceptable Project size is 50 MWac.
- 3.4. Location:
 - 3.4.1. Solar Projects must be 1) interconnected to PJM, and 2) located in the Commonwealth of Virginia. Solar Projects located outside the Commonwealth of Virginia will not be eligible to participate in this RFP.
 - 3.4.2. Wind Projects must interconnect to PJM. APCo prefers Wind Projects to be located in the Commonwealth of Virginia; however, Wind Projects located outside the Commonwealth of Virginia are also eligible to participate in this RFP.
- 3.5. Local Content: APCo encourages the use of local goods or services sourced, in whole or in part, from one or more Virginia businesses in the construction and/or operation of the Project. The bidder should identify these Virginia resources in its proposal.
- 3.6. Project Development:
 - 3.6.1. Bidder must have established site control of the proposed Project. Site control must be in the form of direct ownership, land lease, land lease option or easement. A letter of intent will not be an acceptable form of demonstrated site control.
 - 3.6.2. Each Project must satisfy the applicable AEP Generation Facility Standard (see Appendix F).
 - Solar panels and inverters must be manufactured by those approved vendors in the AEP Generation Facility Standard (see Appendix F).
 - Wind Project turbines must be manufactured by GE, Vestas, or Siemens-Gamesa (see Appendix F).
 - 3.6.3. Solar Projects: Bidders are required to submit all required Solar Resource Information (Appendix H).

- 3.6.4. Wind Projects: Each Wind Project must have a robust wind resource analysis/study prepared by an independent consultant, which shows the expected energy output from the Project utilizing the turbines that will be used for the Project. Such analysis should include P50, P75, P90, P95 and P99 output with 1-year, 5-year, 10-year, 20-year and 30-year estimates. Bidders will be required to provide site information, including raw meteorological data to the Company for use by the Company's independent consultant.
- 3.6.5. New Wind and Solar Projects must have a minimum design life of 30 years.
- 3.6.6. BESS Option: Bidders may include in their proposals, as an option, a Bid Price for a solar or wind energy resource with a battery energy storage system (BESS). The optional BESS must be 1) no larger (MW) than 20% of the nameplate rating (MWac) of the solar or wind energy resource and, 2) for 4 and/or 8 hours of capacity. Battery Energy Storage systems must satisfy the AEP Battery Energy Storage System Technical Specification and Design Criteria (Specification Number GEN-4570) (See Section 5.4 for instructions to obtain GEN-4570).
- 3.6.7. Construction Labor: APCo has a preference that Bidders use union labor with an affiliation to the Building and Construction Trade Unions for the site preparation and construction of the Project. Bidders are required (Section 4.1) to provide alternative Bid Pricing using 1) union labor, and 2) non-union labor.
- 3.6.8. Bidder shall use reasonable efforts to utilize and adopt a subcontracting plan to use small and diverse suppliers as subcontractors for work.
- 3.7. Interconnection:
- 3.7.1. Projects must be interconnected to PJM and have a completed PJM System Impact Study. A copy of the study shall be included with the Bidder's Proposal.
- 3.7.2. Bidders are responsible for following the established policies and procedures that are in effect regarding facility interconnection and operation with the interconnecting utility and PJM.
- 3.7.3. The Bidder is responsible for all costs associated with transmission interconnections and system upgrades as required by the interconnecting utility and PJM.

4. Bid Price and Structure:

- 4.1. Bidders are required to provide alternative Bid Pricing using 1) union labor for the site preparation and construction of the Project as described in §3.67, and 2) non-union pricing for same.
- 4.2. Proposal pricing must be for the Company's acquisition of a turnkey Project that is complete, commercially operable, integrated wind or solar powered electric generating plant designed for a minimum 30-year life:
 - 4.2.1. Solar Projects: including, but not limited to solar modules, inverters, tracking system, balance of plant equipment, operations and maintenance facilities (if applicable), SCADA and all facilities required to deliver energy into PJM. In addition, pricing must include costs associated with ALTA/title insurance and construction financing.
 - 4.2.2. Wind Projects: including, but not limited to, approved wind turbine generators with 30-year life certification (as sited) from manufacturer, balance of plant equipment, O&M facilities, SCADA, IT, all facilities required to deliver energy into PJM. In addition, pricing must include costs associated with ALTA/title insurance and construction financing.
- 4.3. In addition to Sections 4.1 and 4.2, Proposal pricing must include the costs associated with the following:
 - 4.3.1. A minimum of two-year comprehensive warranty from a creditworthy entity for all equipment including design, labor and materials, and fitness for purpose;
 - 4.3.2. Post-commercial operation testing activities and associated costs, including the installation and removal of any temporary test meteorological stations (wind only); and
 - 4.3.3. Transmission and interconnection facilities required for the Project, including system or network upgrades, as required by the interconnecting utility and PJM.
 - 4.3.4. Pricing shall include ALL costs associated with the development, engineering, procurement, construction, commissioning and applicable testing of the facility.
 - 4.3.5. Pricing shall include transfer of all property rights and/or any land lease(s) / easements. (The Bidder owns the land hosting either the O&M facility or a project substation in fee simple; and not leased.)

- 4.4. Solar Projects: The PSA will be for the purchase of 100% of the equity interest of the Project LLC. Three payments under the PSA will be made at Mechanical Completion, Substantial Completion, and Final Completion (See Appendix E – Form Purchase and Sale Agreement for definitions and additional details). The Company will not make any progress payments prior to Mechanical Completion.
- 4.5. Wind Projects: The PSA will be for the purchase of 100% of the equity interest of the Project LLC at the completion and commissioning of the Project. Payment by APCo to the Bidder will be at or near the Commercial Operation Date (COD). The Company will not make any progress payments.
- 4.6. Prices must be firm, representing best and final bid. Proposals and bid pricing must be valid for at least 150 days after the Proposal Due Date.

5. RFP Schedule and Proposal Submission

- 5.1. The schedule and deadlines set out in this section apply to this RFP. APCo reserves the right to revise this schedule at any time and at its sole discretion.

RFP Issued	02/15/21	
Proposal Due Date	03/31/21	
RFP Short-List Identified	04/30/21	
Bidder(s) Selected for Final Contract Negotiations	05/30/21	
Contract Execution	10/01/21	
Submit Petition to State Regulatory Commissions for Approval	11/01/21	
	Project Location	
	VA-domiciled	Non VA-domiciled
Receipt of Regulatory Approval Order(s)	05/01/22	08/01/22
Seller Conditions to NTP achieved	08/01/22	11/01/22
Notice to Proceed (NTP)	08/01/22	11/01/22
Commercial Operation by	12/15/23	12/15/23
Commercial Operation by	12/15/24	12/15/24

- 5.2. Proposals must be complete in all material respects and received no later than 3 p.m. EST on the Proposal Due Date at AEPSC’s Columbus, OH location as defined in Section 6 of this RFP.
- 5.3. Bidders will be required to sign a Confidentiality Agreement (CA) prior to receiving the following documents:
- Form PSA (Appendix E)
 - AEP Generation Facility Standard (Appendix F)
 - SolarDataReviewForm_APCo.xls and SolarEnergyInputSheet_2020.xls (Appendix H)

- Wind/SolarEnergyInputSheet_2020.xls (Appendix I)
- Projected Land Lease Costs spreadsheet (Appendix J)
- AEP Battery Energy Storage System Technical Specification and Design Criteria (Specification Number GEN-4570) (Section 3.6.6)
- AEP Design Criteria for Battery Energy Storage Systems Fire Safety (Document Number: DC-FP-BATT) (Section 7.1.17)

- 5.4. Bidder should request APCo's Form CA by emailing (APCoRenewableRFP2021@aep.com) and including the following documentation:
- Supporting documentation of Bidder's experience in developing, engineering, procuring equipment, constructing and commissioning wind or solar powered electric generation facilities (> Project bid size) in the United States or any portion of Canada and/or otherwise have demonstrated appropriate experience.
 - Verification of Site Control as required by Section 3.6.1.
 - Completed PJM System Impact Study as required by Section 3.7.1.
- 5.5. APCo reserves the right to solicit additional proposals, if it deems necessary to do so, and the right to submit additional information requests to Bidders during the evaluation process.
- 5.6. Proposals and bid pricing must be valid for at least 150 days after the Proposal Due Date at which time Proposals shall expire unless the Bidder has been notified that its Proposal has been included in the Short-List.
- 5.7. A Proposal should be as comprehensive as possible to enable the Company to make a definitive and final evaluation of the Proposal's benefits to its customers without further contact with the Bidder.

6. Proposal Submittal

- 6.1. One hard copy and two electronic thumb drive copies of the Bidder's Proposal shall be submitted by the Proposal Due Date to:

American Electric Power Service Corporation
Attn: 2021 APCo Renewable RFP Manager (PSA)
1 Riverside Plaza – 14th Floor
Columbus, OH 43215

7. Proposal Content

- 7.1. New Build Projects. Bidders must submit the following information for Proposals for new Projects or expansion of existing projects. All electronic versions of the Appendices shall be individual files.

7.1.1. A completed Appendix K (Proposal Content Check Sheet).

- 7.1.2. An executive summary of the Project's characteristics and timeline, including any unique aspects and benefits.
- 7.1.3. A description of environmental justice factors by the Environmental Justice Act (Va. Code §§ 2.2-234, *et. seq.*) that are relevant to the Project. If an Environmental Justice or Fenceline community is potentially affected by the Project, list the steps taken by the Project regarding the Commonwealth's environmental justice policy.
- 7.1.4. Summary documentation demonstrating how the Project will qualify for the PTC for Wind Projects; or the ITC for Solar Projects as applicable. Bidder shall provide a detailed plan regarding the steps taken to date and future actions required to satisfy IRS Safe Harbor requirements.
- 7.1.5. Completed Appendix A (Solar Project Summary) for Solar Projects.
- 7.1.6. Completed Appendix B (Wind Project Summary) for Wind Projects.
- 7.1.7. Detailed information regarding the equipment (e.g. wind turbine, solar module, inverter, and battery energy storage resource if applicable) manufacturer's warranty offering including parts and labor coverage and other key terms.
- 7.1.8. The identity of all persons and entities that have a direct or indirect ownership interest in the Project.
- 7.1.9. A completed Appendix C (Bidder's Credit-Related Information).
- 7.1.10. A completed Appendix D (Bidder Profile). Bidders must provide a general description of its (including its affiliates) background and experience in the development and construction of at least three solar projects similar to the Projects sought by the Company in this RFP. In addition, Bidders should provide at least three third-party references for such projects.
- 7.1.11. Any exceptions to the terms and conditions contained in the applicable Form Purchase Sale Agreement (Appendix E).
- 7.1.12. A list of any proposed exceptions it takes to the applicable (solar or wind) AEP Generation Facility Standard (Appendix F).
- 7.1.13. Any proposed exceptions to AEP Requirements for Connection of Facilities (Appendix G).
- 7.1.14. All required Solar Resource Information (Appendix H).
- 7.1.15. All required Wind Resource Analysis / Study information (Appendix I).

- 7.1.16. Bidder's Proposal shall include expected Land Lease Costs by year for a 30-year operating period for wind and solar resources (See Appendix J for "Land Lease Costs"). The Land Lease costs will be used in the Economic Analysis (Section 8.2).
- 7.1.17. Battery Energy Storage System (BESS) Option: Bidder's providing an alternate Proposal for a "solar or wind energy resource with a BESS" shall provide this option separate from the base solar or wind energy resource only Proposal. This optional Proposal shall include all applicable information from this Section 7 in addition to technical, operating, performance, and warranty details associated with the BESS. Any BESS offered shall comply with the AEP Design Criteria for Battery Energy Storage Systems Fire Safety (Document Number: DC-FP-BATT). This document will be provided to Bidders subsequent to execution of a CA (See Section 5.4).
- 7.1.18. Bidder shall provide its plan to use reasonable efforts to utilize and adopt a subcontracting plan to use small and diverse suppliers as subcontractors for work (Section 3.6.8).
- 7.1.19. Bidder shall include in its proposal the Project's decommissioning study. If a study has not been completed, Bidder shall provide its estimate for removal cost and salvage value.

8. RFP Proposal Evaluation

Proposals must include ALL applicable content requirements as described in Section 7 – Proposal Content. APCo will consider bids that are reliable, feasible and represent the reasonable cost means of satisfying the requirements of this RFP. The Evaluation Process, which includes four main steps, is central to the success of APCo's RFP process.

- Section 8.1: Eligibility and Threshold Requirements
- Section 8.2: Economic Analysis
- Section 8.3: Short List
- Section 8.4: Award Group

- 8.1. Eligibility and Threshold Requirements: If the Bidder does not qualify under any one of the Sections 8.1.1 – 8.1.17, the Bidder will not qualify for this RFP and will be notified accordingly.
- 8.1.1. Base Proposal must be for a Purchase and Sale Agreement for a solar or wind energy resource (§2.4).
 - 8.1.2. Projects must have an Expected COD by 12/15/23 or 12/15/24 (§3.2).
 - 8.1.3. Project must have a minimum nameplate rating of 50 MWac (§3.3).

- 8.1.4. Solar Projects must 1) interconnect to PJM, and 2) be located in the Commonwealth of Virginia (§3.4).
 - 8.1.5. Wind Projects must interconnect to PJM (§3.4).
 - 8.1.6. Bidder must have established Site Control (§3.6.1).
 - 8.1.7. Solar Projects: Solar panels and inverters must be manufactured by approved vendors in the AEP Generation Facility Standard for Solar Facilities (§3.6.2).
 - 8.1.8. Wind Projects: Turbines must be manufactured by GE, Vestas, or Siemens-Gamesa (§3.6.2).
 - 8.1.9. Solar Projects: Bidder must submit all required Solar Resource Information (§3.6.3).
 - 8.1.10. Wind Projects: Bidder must include an independent wind report (§3.6.4).
 - 8.1.11. Project life must be designed for a minimum of 30 years (§3.6.5).
 - 8.1.12. Bidder must have a completed PJM System Impact Study (§3.7.1) which remains active in the PJM queue.
 - 8.1.13. Bidder must provide alternative Bid Pricing for site preparation and construction of the Project using 1) union labor, and 2) non-union labor (§4.1).
 - 8.1.14. Bidder or its affiliates shall have completed the development, engineering, equipment procurement and construction of a wind or solar project within the United States or Canada of size equal to or greater than the Bidder's proposed Project and/or have demonstrated appropriate experience (§5.4).
 - 8.1.15. Bidder must address Environmental Justice requirements (§7.1.3).
 - 8.1.16. Bidder's exceptions to the Form PSA, considered individually or in the aggregate, are minimally acceptable to the Company as a basis for further discussions (§7.1.11).
 - 8.1.17. Proposal must include proposed exceptions, if any, to the applicable AEP Generation Facility Standard in Appendix F. (§7.1.12).
- 8.2. Economic Analysis: During the Economic Analysis phase, the Company will determine the Levelized Cost of Electricity (LCOE) and Levelized Net Cost of Electricity (LNCOE) of each of the Proposals.

The Company's evaluation and final selection of Proposals to the Award Group (§8.4) will be based on the wind and solar base Proposals without the BESS option.

- 8.2.1. LCOE: The Company will determine the Levelized Cost of Energy (LCOE) of each qualifying Proposal. The LCOE calculation is based on the Proposal's Bid Price (\$/M), Expected Annual Energy, Operations and Maintenance Costs (including Land Lease costs), applicable Federal Tax Credit (Wind – Production Tax Credit, Solar – Investment Tax Credit), and the impact (+/- \$/MWh) associated with the transmission congestion as determined by the Company's transmission congestion screening analysis, as applicable. Additionally, other costs may be included based on the Company's discretion to appropriately evaluate each Proposal. This may be done to ensure the Company is comparing all qualifying Proposals on an equivalent basis.
- 8.2.2. LNCOE: The LNCOE will be calculated by taking the difference between the (a) levelized expected PJM revenues for the Proposal's energy, capacity, and renewable energy certificates in the PJM market, and (b) LCOE for each Proposal.
- 8.3. Short-List: APCo will identify one or more Short-Listed Bidders for further discussions. Bidders not selected to the Short-List will be notified promptly. During the Short-List evaluation process, the Company will consider all applicable factors including, but not limited to, the following to determine the viability of the Proposal:
- Levelized Net Cost of Energy.
 - The terms of the Proposal.
 - Environmental / wildlife impact.
 - Bidder's financial wherewithal.
 - Bidder's experience.
 - Status of interconnection process with PJM.
 - Project nameplate capacity.
 - Consideration of impact on Environmental Justice and Fenceline communities.
 - Community relations and economic development considerations.
 - The development status of Bidder's generation facility including, but not limited to permitting status.

- The degree of risk as to the availability of the power or the resources in the time frame proposed.
- Bidder's exceptions to the applicable AEP Generation Facility Standard.
- Bidder's plan to use small and diverse suppliers as subcontractors.

8.4. Award Group: APCo will consider bids that are reliable, feasible and represent a reasonable cost means of satisfying the requirements of this RFP. APCo will identify one or more Short-Listed Bidders for further discussions and negotiations of one or more executable agreements. Bidders not selected to the Award Group will be notified promptly.

9. Reservation of Rights

A Proposal will be deemed accepted only when the Company and the successful Bidder have executed definitive agreements for the Company's acquisition of the Project. The Company has no obligation to accept any Proposal, whether or not the stated price in such Proposal is the lowest price offered, and the Company may reject any Proposal in its sole discretion and without any obligation to disclose the reason or reasons for rejection.

By participating in the RFP process, each bidder agrees that any and all information furnished by or on behalf of the Company in connection with the RFP is provided without any representation or warranty, express or implied, as to the usefulness, accuracy, or completeness of such information, and neither the Company nor its Affiliates nor any of their personnel or representatives shall have any liability to any bidder or its personnel or representatives relating to or arising from the use of or reliance upon any such information or any errors or omissions therein.

The Company reserves the right to modify or withdraw this RFP, to negotiate with any and all qualified Bidders to resolve any and all technical or contractual issues, or to reject any or all Proposals and to terminate negotiations with any Bidder at any time in its sole discretion. The Company reserves the right, at any time and from time to time, without prior notice and without specifying any reason and, in its sole discretion, to (a) cancel, modify or withdraw this RFP, reject any and all Proposals, and terminate negotiations at any time during the RFP process; (b) discuss with a Bidder and its advisors the terms of any Proposal and obtain clarification from the Bidder and its advisors concerning the Proposal; (c) consider all Proposals to be the property of the Company, subject to the provisions of this RFP relating to confidentiality and any confidentiality agreement executed in connection with this RFP, and destroy or archive any information or materials developed by or submitted to the Company in this RFP; (d) request from a Bidder information that is not explicitly detailed in this RFP, but which may be useful for evaluation of that Bidder's Proposal; (e) determine which Proposals to accept, favor, pursue or reject; (f) reject any Proposals that are not complete or contain irregularities, or waive irregularities in any Proposal that is submitted; (g) accept Proposals that do not provide the lowest evaluated cost; (h) determine which Bidders are allowed to participate in

the RFP, including disqualifying a Bidder due to a change in the qualifications of the Bidder or in the event that the Company determines that the Bidder's participation in the RFP has failed to conform to the requirements of the RFP; (i) conduct negotiations with any or all Bidders or other persons or with no Bidders or other persons; (j) execute one or more definitive agreements with any Bidder, and (k) utilize a Bidder's completed Appendices and any supplemental information submitted by the Bidder in any its regulatory filings.

10. Confidentiality

APCo will take reasonable precautions and use reasonable efforts to maintain the confidentiality of all bids submitted. Bidders should clearly identify each page of information considered to be confidential or proprietary. APCo reserves the right to release any proposals to agents or consultants for purposes of proposal evaluation. APCo's disclosure policies and standards will automatically bind such agents or consultants. Regardless of the confidentiality, all such information may be subject to review by or in proceedings before the appropriate state authority, or any other governmental authority or judicial body with jurisdiction relating to these matters and may be subject to legal discovery. Under such circumstances, APCo and AEPSC will make reasonable efforts to protect Bidder's confidential information.

11. Bidder's Responsibilities

- 11.1. It is the Bidder's responsibility to submit all requested material by the deadlines specified in this RFP.
- 11.2. The Bidder should make its proposal as comprehensive as possible so that APCo may make a definitive and final evaluation of the proposal's benefits to its customers without further contact with the Bidder.
- 11.3. Bidders are responsible for the timely completion of the project and are required to submit proof of their financial and technical wherewithal to ensure the successful completion of the project.
- 11.4. The Bidder will be responsible for any expenses Bidder incurs in connection with the preparation and submission of a Proposal and/or any subsequent negotiations regarding a Proposal in response this RFP. APCo will not reimburse Bidders for their expenses under any circumstances, regardless of whether the RFP process proceeds to a successful conclusion or is abandoned by APCo at its sole discretion.

12. Contacts

- 12.1. General RFP Questions: All correspondence and questions, with the exception of interconnection related questions, regarding this RFP should be directed to:
APCoRenwableRFP2021@aep.com

12.2. PJM Interconnection: All correspondence and questions regarding the PJM Interconnection process can be found at:

[PJM Interconnection](#)

Appendix A

Solar Project Summary

Company Information

Bidder (Company):		
Contact Name:		
Contact Title:		
Address:		
City:	State:	Zip Code:
Work Phone:	Cell Phone:	
Email Address:		
Is the Proposal being submitted through a partnership, joint venture, consortium, or other association? _____ If so, please identify all partners, joint ventures, members, or other entities or persons comprising same.		

General Project Information

Project Name:	
Project site located (County, State):	
Percentage of Federal Investment Tax Credit that the Project will qualify for:	
PJM Queue #:	
Expected Commercial Operation Date:	
Module Manufacturer / Model:	Annual Degradation (%):
Configuration (Fixed Tilt / Single Axis):	Design Life (years):
Inverter Manufacturer / Model:	
Solar Project Nameplate (MWac): Solar Project Nameplate (MWdc): Battery Energy Storage System (MWac) (optional):	Expected Annual Availability (%):
<i>If Bidder has not finalized Module Manufacturer, they must identify the module options and provide the applicable production data (Expected Annual Energy, Capacity Factor) for each module mfg. Bidder shall attach module warranty information with its proposal.</i>	

Proposal Bid Pricing

Expected COD by	Module Mfg.	Expected Annual Energy	Capacity Factor	Bid Price, \$M	
				Union Labor	Non-Union Labor
12/15/23				\$	\$
12/15/24				\$	\$

Does Bid Price take into consideration the AEP Requirements for Connection of Facilities (Appendix G)	(Y/N):
<i>If Bidder has not finalized Module Manufacturer, they must identify the module options and provide the applicable production data (Expected Annual Energy, Capacity Factor) for each module mfg. Bidder shall attach module warranty information with its proposal.</i>	

Interconnection (PJM)

PJM Queue #:	Substation Name / Voltage:
Feasibility Study Complete (Y/N):	Feasibility Study Report Date:
System Impact Study Complete (Y/N):	System Impact Study Report Date:
Point of Interconnection with :	
PJM Interconnection Status (describe):	
<i>Please attach a copy of all interconnection studies and/or the expected completion date(s).</i>	

Site Information

Site Legal Description:		
Address:		
City:	State:	Zip Code:
County	Longitude:	Latitude:
Site Control (lease, own, site purchase pending, etc.):		
Site Acres:		
Is there potential for expansion (Y / N):	If Yes; acres available:	

BESS (If applicable)

Use Case:	Integrator:
Battery Manufacturer:	Type of Battery:
Battery Model Number:	Cycles per Day:
Nameplate (MWac):	Ramp Rate:
Nameplate (MWdc):	Charge Time:
Duration (hours):	Maximum Charge Rate:
Energy (MWh):	Round Trip Efficiency:
Aux Load:	Aux Power Source:
Overbuild (MW):	Overbuild Years:
PCS Unit Power (kW):	PCS Minimum Voltage:
Qty PCS:	PCS Maximum Voltage:
Inverter Manufacturer / Model:	
Fire Suppression System (wet / pre-action):	
EMS Manufacturer / Model:	

Permits

Have you contacted all required permitting agencies regarding this project and identified all necessary permits?

City (Y / N):

County (Y / N):

State (Y / N):

Federal (Y / N):

 USF&W (Y / N):

 Other (Y / N)

On an additional sheet, list and describe all city, county, state and federal permits required for this project. Include: status, duration, planned steps, critical milestones and timeline.

Preliminary Site Questions¹ (Y/N)

Has the site been assessed for any environmental contamination? Describe any known environmental issues. If necessary, please describe on a separate attachments	
Are there any Tribal Lands or Tribal mineral ownership rights within Project boundary or vicinity?	
Are there any Federally or State owned or controlled lands within Project boundary or vicinity?	
Is the site adjacent or near an Environmental Justice or Fenceline community?	
Has TNC or any other non-governmental organizations been engaged?	
Are there CRP, WRP or other conservation easements within the Project boundary or vicinity?	

Attachments Required

- Site Layout: Attach a diagram identifying anticipated placement of major equipment and other project facilities, including transmission layouts and Point of Delivery.
- Leases: Attach (electronic version only) a copy of all leases, easements or other ownership documentation.
- Permit Matrix: Attach a comprehensive permit matrix and status of all required permits, including, but not limited to Federal (USF&W, FAA), State, County, City, etc.
- Environmental Report Summary: The initial Proposals shall include a summary of all environmental and other reports associated with the site. (See Note 1 for reports to summarize)

Note 1: As applicable, the following reports will be requested: Tier I / II Site Characterization Report, Environmental Work / Survey Plan, Bat Acoustic Survey Report, Avian Use Survey Report, Raptor Nest Survey Report, Prey-base Survey Report, Wetland, Waters and Playa Survey / Assessment Report, Whooping Crane Habitat Assessment Report, Lesser Prairie Chicken Survey / Assessment Report, Phase I Environmental Site Assessment Report, Historical and Cultural Resource Survey / Assessment Report, All Other Species and Environmental Resource Survey and Study Reports, Record and Notes of all Federal or State Resource Agency Correspondence and Meetings, Turbine and Environmental Resource Shapefiles (.kmz format), and Bird and Bat Conservation Strategy and Eagle Conservation Plan (if available).

Virginia “Goods & Services”

Describe how the Bidder will be using local goods or services sourced whole or in part from one or more Virginia businesses, as applicable, to the extent practical in the purchase of equipment and material, or services for the Project.

Turbine Manufacturer (GE/SiemensGamesa/Vestas)	
Nameplate (MW)	
# of Turbines	
Model #	
Expected Capacity Factor (%)	
Expected Annual Energy (MWh)	
Year 1 Capacity Factor (%) ²	
Year 1 Expected Annual Energy ²	

Note 1: Bidder is required to identify the Turbine Manufacturer and associated data above for their bid.

Note 2: Year 1 production data is required to account for potential lower Year 1 production due to routine maintenance associated with the break-in period.

Interconnection (PJM)

PJM Queue #:	Substation Name / Voltage:
System Impact Study Complete (Y/N):	System Impact Study Report Date:
Feasibility Study Complete (Y/N):	Feasibility Study Report Date:
Point of Interconnection with :	
PJM Interconnection Status (describe):	
Attach electronic copies of all interconnection studies and/or the expected completion date(s).	

BESS (If applicable)

Use Case:	Integrator:
Battery Manufacturer:	Type of Battery:
Battery Model Number:	Cycles per Day:
Nameplate (MWac):	Ramp Rate:
Nameplate (MWdc):	Charge Time:
Duration (hours):	Maximum Charge Rate:
Energy (MWh):	Round Trip Efficiency:
Aux Load:	Aux Power Source:
Overbuild (MW):	Overbuild Years:
PCS Unit Power (kW):	PCS Minimum Voltage:
Qty PCS:	PCS Maximum Voltage:
Inverter Manufacturer / Model:	
Fire Suppression System (wet / pre-action):	
EMS Manufacturer / Model:	

Site Information

Site Legal Description:		
Address:		
City:	State:	Zip Code:
County	Longitude:	Latitude:
Site Control (lease, own, site purchase pending, etc.):		
Site Acres:		
Is there potential for expansion (Y / N):	If Yes; acres available:	

Permits

Have you contacted all required permitting agencies regarding this project and identified all necessary permits?

City (Y / N):

County (Y / N):

State (Y / N):

Federal (Y / N):

USF&W (Y / N):

Other (Y / N)

On an additional sheet, list and describe all city, county, state and federal permits required for this project. Include: status, duration, planned steps, critical milestones and timeline.

Preliminary Site Questions¹ (Y/N)

Has the site been assessed for any environmental contamination? Describe any known environmental issues. If necessary, please describe on a separate attachments	
Are there any Tribal Lands or Tribal mineral ownership rights within Project boundary or vicinity?	
Are there any Federally or State owned or controlled lands within Project boundary or vicinity?	
Is the site adjacent or near an Environmental Justice or Fenceline community?	
Has TNC or any other non-governmental organizations been engaged?	
Are there CRP, WRP or other conservation easements within the Project boundary or vicinity?	

Attachments Required

- Site Layout: Attach a diagram identifying anticipated placement of major equipment and other project facilities, including transmission layouts and Point of Delivery.
- Leases: Attach (electronic version only) a copy of all leases, easements or other ownership documentation.
- Permit Matrix: Attach a comprehensive permit matrix and status of all required permits, including, but not limited to Federal (USF&W, FAA), State, County, City, etc.
- Environmental Report Summary: The initial Proposals shall include a summary of all environmental and other reports associated with the site. (See Note 1 for reports to summarize)

Note 1: As applicable, the following reports will be requested: Tier I / II Site Characterization Report, Environmental Work / Survey Plan, Bat Acoustic Survey Report, Avian Use Survey Report, Raptor Nest Survey Report, Prey-base Survey Report, Wetland, Waters and Playa Survey / Assessment Report, Whooping Crane Habitat Assessment Report, Lesser Prairie Chicken Survey / Assessment Report, Phase I Environmental Site Assessment Report, Historical and Cultural Resource Survey / Assessment Report, All Other Species and Environmental Resource Survey and Study Reports, Record and Notes of all Federal or State Resource Agency Correspondence and Meetings, Turbine and Environmental Resource Shapefiles (.kmz format), and Bird and Bat Conservation Strategy and Eagle Conservation Plan (if available).

Virginia “Goods & Services”

Describe how the Bidder will be using local goods or services sourced whole or in part from one or more Virginia businesses, as applicable, to the extent practical in the purchase of equipment and material, or services for the Project.

Appendix C

Bidder's Credit-Related Information

Full Legal Name of the Bidder:
Type of Organization (Corporation, Partnership, etc.):
Bidder's % Ownership in Proposed Project:
Full Legal Name(s) of Parent Corporation: 1. 2. 3.
Entity Providing Credit Support on Behalf of Bidder (if applicable): Name: Address: City: Zip Code:
Type of Relationship:
Current Senior Unsecured Debt Rating: 1. S&P: 2. Moodys:
Bank References & Name of Institution:
Bank Contact: Name: Title: Address: City: Zip Code: Phone Number:
Legal Proceedings: As a separate attachment, please list all lawsuits, regulatory proceedings, or arbitration in which the Bidder or its affiliates or predecessors have been or are engaged that could affect the Bidder's performance of its bid. Identify the parties involved in such lawsuits, proceedings, or arbitration, and the final resolution or present status of such matters.
Financial Statements: Please provide copies of the Annual Reports for the three most recent fiscal years and quarterly reports for the most recent quarter ended, if available. If available electronically, please provide link:

Appendix D

Bidder Profile

Please list Bidder's Affiliate companies:

- 1.
- 2.
- 3.
- 4.

Please attach a summary of Bidder's background and experience in Solar Energy projects.

References

1. Company
 - a. Contact Name:
 - b. Contact Number:
 - c. Project:
2. Company
 - a. Contact Name:
 - b. Contact Number:
 - c. Project:
3. Company
 - a. Contact Name:
 - b. Contact Number:
 - c. Project:
4. Company
 - a. Contact Name:
 - b. Contact Number:
 - c. Project:

Appendix E

Form Purchase and Sale Agreement

See Section 5.4 for instructions to obtain the applicable Form Purchase and Sale Agreement.

Appendix F

AEP Generation Facility Standard

See Section 5.4 for instructions to obtain the applicable (solar or wind) AEP Generation Facility Standard.

Appendix G

AEP Requirements for Connection of Facilities

Please follow the link below to access the AEP Requirements for Connection of Facilities (“Requirements for Connection of New Facilities or Changes to Existing Facilities Connected to the AEP Transmission System”).

https://www.aep.com/assets/docs/requiredpostings/TransmissionStudies/Requirements/AEP_Interconnection_Requirements_Rev2.pdf

Appendix H

Solar Resource Information

See Section 5.4 for instructions to obtain any of the documents identified below:

1. Proposal must provide the source and basis of the solar irradiance data used in the development of energy projections for the Project. Explain all assumptions used in forecasted generation calculations.
2. Bidder must populate the data required in the Company's "SolarDataReviewForm_IM" spreadsheet.
3. Bidder must attach an 8760 calendar year hourly energy forecast, net of all losses using the Company's form spreadsheet (SolarEnergyInputSheet_2020.xls).

Appendix I

Wind Resource Analysis / Study

Required Information

- Attach the independent wind energy report
 - Wind report shall also include P50, P75, P90, P95 and P99 production estimates with 1, 5, 10, 20 and 30 year timeframes
 - Independent consultant information (resume, contact information) if not included in the wind energy report.
- Describe on-site meteorological campaign including:
 - Number of met towers
 - Height of met towers
 - Remote sensing (lidar and/or sodar)
 - Number of years of data for each tower / remote sensing device.
- Identify any wind direction sector management or other operation restrictions.
- Experience of developer in OK, AR, LA and TX. Identify the number of projects, years each project has been operating, turbine models and capacity rating.
- Source and basis of the wind speed data used in the development of energy projections for the project. Explain all assumptions for wake losses, line losses, etc. and the location where the data was measured.
- Wind turbine power curve adjusted for the site's specific air density.
- Provide a description of the system intended to provide real-time telemetry data.
- Attach an 8760 calendar year hourly energy forecast, net of all losses (See Section 5.4 for instructions to obtain the WindEnergyInputSheet_2020.xls.)
- Bidders shall provide a summary of representative wind data with measurement height referenced and any extrapolations used to estimate the wind speeds at the proposed hub height. (This item shall be provided in the electronic (CD, flash drive, etc.) version of the Proposal only.)

The following information should be available upon request; however, is not required with the submission of the Proposal.

- Project boundary (shape files, kmz files, or pdf on USGS topographic map)
- Land control, broken down by leased land, likely to be leased land, likely NOT to be leased land, and indeterminate status (shape files, kmz are best)
- Setbacks/exclusions (shape files preferred),
- Met tower installation commissioning sheets and all subsequent maintenance documents
- Raw data files for all on-site met towers
- If applicable, sodar or lidar documentation and raw data files
- Proposed turbine locations (shape file, kmz file, Excel file with coordinates, including map datum (e.g., WGS84, NAD83)
- All documents related to turbine availability, electrical system design with losses
- Any other materials the developer has in terms of turbine siting

Appendix J

Projected Land Lease Costs

See Section 5.4 for instructions to obtain the Land Lease Costs spreadsheet.

Appendix K

Proposal Content Check Sheet

Section	Item	Completed
7.1.2	Executive Summary	
7.1.3	Environmental Justice	
7.1.4	Summary PTC/ITC Documentation	
7.1.5	Appendix A (Solar Project Summary)	
	- Company & Generation Project Information	
	- Bid Pricing	
	o Module warranty information	
	- PLA Confirmation	
	- Interconnection and Point of Delivery	
	o Attach copies of all interconnection studies / completion dates	
	- Site Information	
	o Site map	
	o Attach copies of site leases	
	o Permit Matrix	
	o Describe any known environmental issues.	
	o Decommissioning Studies	
	- Virginia “Goods and Services” (if applicable)	
	- Solar Resource Data (source, basis, assumptions, etc.)	
	- Solar Resource Data (SolarDataReviewForm_IM.xls)	
	- Energy Input Sheet (electronic only)	
	- Solar Projects Completed	
7.1.6	Appendix B (Wind Project Summary)	
	- Company & Generation Project Information	
	- Bid Pricing	
	o Wind Turbine and Facility Information	
	- PLA Confirmation	
	- Interconnection and Point of Delivery	
	o Attach copies of all interconnection studies / completion dates	
	- Site Information	

	○ Site map	
	○ Attach copies of site leases	
	○ Permit Matrix	
	○ Describe any known environmental issues.	
	○ Decommissioning Studies	
	- Virginia “Goods and Services” (if applicable)	
	- Wind Resource Data (source, basis, assumptions, etc.)	
	- Wind Projects Completed	
7.1.7	Wind Turbine, Module and Inverter warranty information	
7.1.8	Identity of Persons / Ownership	
7.1.9	Appendix C (Bidder’s Credit Related Information)	
7.1.10	Appendix D (Bidder Profile)	
7.1.11	Appendix E (Exceptions to Form PSA)	
7.1.12	Appendix F (Exceptions to AEP Wind or Solar Generation Standard)	
7.1.13	Appendix G (Exceptions to AEP Requirements for Connection of Facilities)	
7.1.14	Appendix H (Solar Resource Information), if applicable	
7.1.15	Appendix I (Wind Resource Analysis / Study), if applicable	
7.1.16	Projected Land Lease Costs	
7.1.17	BESS Information (Optional)	
7.1.18	Bidder’s plan to use small and diverse suppliers as subcontractors	
7.1.19	Decommissioning study or other estimates for decommissioning	