

## American Electric Power Service Corporation as agent for Appalachian Power Company

# Request for Proposals Purchase and Sale Agreements (PSAs)

from Qualified Bidders

Totaling up to 600 MWac of nameplate rated Wind Energy Resources

and / or

Solar Energy Resources with Optional Energy Storage Systems

RFP Issued: April 4, 2023

Proposals Due: May 31, 2023

Web Address: <a href="https://www.appalachianpower.com/rfp">https://www.appalachianpower.com/rfp</a>



#### **Table of Contents**

	Page
1) Introduction	1
2) RFP Overview	2
3) Product Description and Requirements	4
4) Bid Price and Structure	6
5) RFP Schedule	7
6) Proposal Submission	8
7) Proposal Content	9
8) Proposal Evaluation	12
9) Reservation of Rights	15
10) Confidentiality	16
11) Bidder's Responsibilities	16
12) Contacts	17
Attachments	
Proposal Content Check Sheet	Appendix A
Project Summary	Appendix B
Proposal Bid Pricing	Appendix C
Bidder's Credit-Related Information	Appendix D
Exceptions to Form Purchase and Sale Agreement	Appendix E
Exceptions to AEP Generation Facility Standard	Appendix F
Exceptions to AEP Requirements for Connection of Facilities	Appendix G
Solar Resource Information	Appendix H
Wind Resource Analysis / Study	Appendix I
Energy Storage Resource Information	Appendix J
Projected Land Lease / Decommissioning Costs / Property Taxes	Appendix K
Project Technical Due Diligence Material	Appendix L
Local Goods & Services / Small & Diverse Suppliers / Environmental Justice	Appendix M



#### **BACKGROUND**

APCo is pursuing additional renewable resources via four requests for proposals (RFPs) as follows:

PSA	Wind and Solar RFP for up to 600 MW via one or more purchase and sale agreements (PSAs) for purchase of 100% equity interest in a project company.
PPA	Wind and Solar RFP for up to 200 MW of energy, capacity, and environmental attributes (including renewable energy certificates) via one or more power purchase agreements (PPAs) will be issued simultaneously.
REC	RFP for renewable energy certificates (RECs) will be issued simultaneously.
Energy Storage	RFP for distribution applications of energy storage will be issued at a later date in 2023.

This RFP is associated with the PSA RFP only.

#### 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 RFP on behalf of APCo. Affiliates of AEP and APCo (Affiliate) are not permitted to participate in this RFP.

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. Based in Columbus, Ohio, AEP is powering a cleaner, brighter energy future for its customers and communities. AEP's approximately 17,000 employees operate and maintain the nation's largest electricity transmission system and more than 225,000 miles of distribution lines to safely deliver reliable and affordable power to 5.6 million regulated customers in 11 states. AEP also is one of the nation's largest electricity producers with approximately 31,000 megawatts of diverse generating capacity, including more than 6,900 megawatts of renewable energy. The company's plans include growing its renewable generation portfolio to approximately 50% of total capacity by 2032. AEP is on track to reach an 80% reduction in carbon dioxide emissions from 2005 levels by 2030 and has committed to achieving net zero by 2045. AEP is recognized consistently for its focus on sustainability, community engagement, and diversity, equity and inclusion. AEP's family of companies includes utilities 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, east Texas and the Texas Panhandle). AEP also owns AEP Energy, which provides innovative competitive energy solutions nationwide. For more information, visit 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 with the requirements of the Virginia Clean Economy Act (VCEA) 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.
- 2.2. APCo has also issued this RFP to solicit proposals in support of WV Senate Bill 583<sup>1</sup>. Senate Bill 583 has created a program to further the development of renewable energy resources and renewable energy facilities for solar energy and energy storage resources. The program, in part, provides "an application process and program for multiyear comprehensive renewable energy facilities for electric utilities, as defined, to plan, design, construct, purchase, own, and operate renewable energy generating facilities, energy-storage resources, or both under special conditions, requirements, and limitations."
- 2.3. APCo is requesting Proposals that will result in obtaining up to 600 MWac of nameplate rated Wind and/or Solar Energy Resources (Solar Project, Wind Project, Project). For Solar Energy Resources, Bidders are encouraged to submit proposals with co-located energy storage systems (Storage Option). Depending on the results of the RFP, the Company may pursue additional resources beyond 600 MWac. The minimum nameplate rated bid size for this RFP is 50 MWac.

APCo RFP (PSA)

<sup>1</sup> https://www.wvlegislature.gov/Bill Status/bills text.cfm?billdoc=SB583 SUB1 ENR.htm&yr=2020&sesstype=RS&billtype=B&houseorig=S&i=583



- 2.4. 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 energy resource with a co-located energy storage system option. Standalone energy storage system proposals will not be accepted in this RFP.
- 2.5. 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 Completion<sup>2</sup> for solar projects with a co-located energy storage system option and on or about final completion for wind and/or solar projects. APCo will not consider proposals in this RFP that do not meet these criteria. Proposals for operational projects are eligible to be submitted into this RFP. Proposals for PPAs or REC products are not being sought in this RFP.
- 2.6. APCo is seeking projects that will qualify for the Federal Production Tax Credit (PTC) or the Federal Investment Tax Credit (ITC). 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 (§8.2.1) and ranking of each of the respective Proposals.
- 2.7. APCo is requesting proposals for both new and operational projects. Any proposals submitted for operational projects must demonstrate that the underlying asset has a minimum of 10 years of operational life remaining based on initial design standards to participate in this RFP. In addition, Bidders of operational projects must have 100% ownership of the asset or have documented authority to offer the asset into the RFP.
- 2.8. Affiliates of AEP and APCo (Affiliate) will not participate in 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 can seek a prudency determination at the Virginia State Corporation Commission (VA SCC) and will seek a certificate to own and operate the facility. For both Virginia domiciled and non-domiciled Projects, APCo will seek approval of cost recovery from the VA SCC and the West Virginia Public Service Commission (WV PSC). If the WV PSC denies cost recovery, all of the costs will be allocated to APCo's Virginia customers. Thus, approvals from the VA SCC are necessary for APCo's acquisition of any Project(s), and the WV PSC's decision will determine how APCo recovers the costs related to the Project(s).
- 2.11. All questions regarding this RFP should be emailed to: APCo2023RFP@aep.com

APCo RFP (PSA)

<sup>&</sup>lt;sup>2</sup> Mechanical Completion means the Project has been mechanically completed, assembled, erected and installed in accordance with the terms and conditions of the PSA.



APCo will post a list of the non-confidential "Questions and Answers" on its RFP website <a href="https://www.appalachianpower.com/rfp">https://www.appalachianpower.com/rfp</a> 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. <u>Completed Project:</u> 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 12/15/2026.
- 3.3. <u>Size:</u> The APCo RFP is seeking up to 600 MWac of nameplate rated Wind and/or Solar generation resources. The minimum acceptable Project size is 50 MWac.
- 3.4. <u>Location:</u> Projects must be physically located in the PJM Interconnection L.L.C. Region (e.g., interconnect to the PJM Transmission system). The Company prefers projects located in the Commonwealth of Virginia or the state of West Virginia on Eligible Sites. Eligible Site means any site in the state of West Virginia that has been previously used in electric generation, industrial, manufacturing or mining operations, including, but not limited to, brownfields, closed landfills, hazardous waste sites, former industrial sites, and former mining sites.
- 3.5. <u>Local Goods & Services:</u> APCo encourages the use of local goods or services sourced, in whole or in part, from one or more Virginia or West Virginia businesses in the construction and/or operation of the Project or United States-based manufacturers using materials or product components made in Virginia, West Virginia or the United States.

#### 3.6. Project Development:

- 3.6.1. Bidder must have established substantial site control of the proposed Project. Site control must be in the form of direct ownership, land lease, land lease option or easement for at least 35 years. 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 (Appendix F), and the following requirements as applicable:



- Solar panels, inverters and storage equipment (if included), must be manufactured by those approved vendors in the applicable AEP Generation Facility Standard (Appendix F).
- Wind Project turbines must be manufactured by GE, Vestas, or Siemens-Gamesa (Appendix F).
- o Energy storage system option shall comply with the AEP Design Criteria for Battery Energy Storage Systems Fire Safety (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 for use by the Company's independent consultant (Appendix I).
- 3.6.5. Energy Storage System Option: The energy storage system component of any proposal must be 1) be integrated with the solar facility and substation, 2) no larger (MW) than 33% of the nameplate rating (MWac) of the solar energy resource and, 3) for up to 8 hours of capacity. Bidders are required to submit all required Energy Storage Resource Information (Appendix J).
- 3.6.6. New Wind and Solar Projects must have a minimum design life of 30 years and energy storage projects must have a minimum design life of 20 years. Operational Wind and Solar Projects must have a minimum of 10 years of operational life remaining based on initial design standards.
- 3.6.7. Proposals that include the use of Union Labor are preferred by APCo, but Proposals with non-Union Labor will be accepted. Bidders must indicate if Projects will comply with Prevailing Wage and Apprenticeship Requirements (PWAR) tied to full value Federal Tax Credits (e.g., PTCs and ITCs) provided under the Inflation Reduction Act.
- 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.
- 3.6.9. Bidder shall review and follow AEP's Code of Conduct. The Code of Conduct can be found: AEP Code of Conduct

#### 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 must 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. 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:
  - 4.1.1. Solar Projects: including, but not limited to solar modules, inverters, racking, tracking system, balance of plant equipment, operations and maintenance (O&M) facilities, project substation, generation tie-line, SCADA, IT, and all facilities required to deliver energy into PJM. In addition, pricing must include costs associated with ALTA/title insurance and construction financing. In addition, if Bidders are submitting a project that includes an energy storage system option, the Proposal Bid Price shall include all equipment associated with the energy storage system.
  - 4.1.2. 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, project substation, generation tie-line, SCADA, IT, and all facilities required to deliver energy into PJM. In addition, pricing must include costs associated with ALTA/title insurance and construction financing. Operational wind projects are not required to possess cold weather package for turbines.
- 4.2. In addition to Sections 4.1, Proposal pricing must include the costs associated with the following:
  - 4.2.1. A minimum of two-year comprehensive warranty from a creditworthy entity for all work and equipment including design, labor and materials, and fitness for purpose;
  - 4.2.2. Post-commercial operation testing activities and associated costs, including the installation and removal of any temporary test meteorological stations (wind only);



- 4.2.3. Transmission and interconnection facilities required for the Project, including system or network upgrades, as required by the interconnecting utility and PJM;
- 4.2.4. Pricing shall include ALL costs associated with the development, engineering, procurement, construction, commissioning and applicable testing of the facility;
- 4.2.5. Pricing shall include transfer of all property rights and/or any land lease(s) / easements. The Bidder must own the land hosting the O&M facility and the project substation in fee simple and not leased;
- 4.2.6. Pricing shall include any costs associated with meeting the credit requirements stated in the Form PSA.
- 4.3. The proposal shall not be contingent upon awarding an operations and maintenance agreement for the Project and Proposal Bid Price shall not be contingent upon an operations and maintenance agreement for the Project.
- 4.4. Wind and/or Solar Projects: The PSA will be for the purchase of 100% of the equity interest of the Project LLC on or about final completion 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.
- 4.5. Solar Projects with an Energy Storage System Option: 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 for definitions and additional details). The Company will not make any progress payments prior to Mechanical Completion.
- 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

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 Schedule	VA Project	Non-VA Project
RFP Issued	04/04/2023	
Proposal Due Date	05/31/2023 (Due by 3 p.m. EST)	
Final Project Selection	08/23/2023	
Contract Execution	By 01/31/2024	
Submit Petition to State Regulatory	By 04/30/2024	
Commissions for Approval		
Receipt of Regulatory Approval	~4-7 Months After	~7 Months After



Order(s)	Petition Submitted <sup>3</sup>	Petition Submitted
Notice to Proceed (NTP)	By 01/1	5/2025
Commercial Operation	By 12/1	5/2026

#### 6. Proposal Submission

- 6.1. Bidders will be required to sign a Confidentiality Agreement (CA) prior to receiving detailed instructions on how to access the following documents and submit Proposals.
  - Form PSA (Appendix E)
  - AEP Generation Facility Standard (Appendix F)
    - o Wind: GEN-4560 Wind Projects Technical Spec Rev 8
    - o Solar: GEN-4550 Solar Projects Technical Spec Rev 13
    - o Energy Storage:
      - GEN-4570 BESS Technical Spec Rev 5
      - DC-FP-BATT BESS Fire Safety Rev 1
  - Scope of Work (Appendix F)
  - "Energy Input Sheet" spreadsheet (Appendix H, Appendix I)
  - "Solar Modeling Input Sheet" spreadsheet (Appendix H)
  - "Energy Storage Design Criteria Data Sheet" spreadsheet (Appendix J)
  - "Project Land Decom Property Taxes" spreadsheet (Appendix K)
- 6.2. Bidder should request APCo's Form CA by emailing (<u>APCo2023RFP@aep.com</u>) 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 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.
- 6.3. Proposals must be complete in all material respects and shall be submitted electronically no later than 3 p.m. EST on the Proposal Due via a Box site. Detailed instructions on how to submit Proposals will be provided upon signing a CA.
- 6.4. The Company 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 Proposal evaluation process.

<sup>3</sup> If the Project is domiciled in Virginia, APCo may seek a prudency determination at the Virginia State Corporation Commission (VA SCC) depending on the Project's Contract Execution date.

APCo RFP (PSA)



- 6.5. 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 Final Project Selection.
- 6.6. 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.

#### 7. Proposal Content

Bidders must submit the following information for Proposals. All electronic versions of the Appendices shall be uploaded to the designated folders in the Box site.

- 7.1. A completed Proposal Content Check Sheet (Appendix A).
- 7.2. An executive summary of the Project's characteristics and timeline, including any unique aspects and benefits.
- 7.3. A completed Project Summary (Appendix B) for Solar and/or Wind Projects, including the electronic Project Summary Form (link to form in the Box site), which must include the following attachments:
  - <u>PTC/ITC Strategy</u>: Summary of how the Project will qualify for Federal Tax Credits including:
    - A detailed description of how Projects intend to comply with PWAR tied to full value Federal Tax Credits provided under the Inflation Reduction Act. This includes the Bidder's process and tools (e.g., software) for collecting, organizing, and retaining sufficient records to establish compliance with PWAR and ability to timely deliver records for review during a Project. These records are expected to provide information necessary to make a determination as to whether the Project satisfies PWAR as detailed in IRS Notice 2022-61 and subsequent guidance.
    - Detailed information regarding the Project's ability to qualify for bonus credits provided under the Inflation Reduction Act (i.e., Domestic Content Bonus Credit and Energy Community Bonus Credit).
  - <u>Interconnection Studies</u>: Include a copy of all completed interconnection studies (i.e., System Impact Study, Facilities Study, etc.).
  - <u>Site Layout</u>: Include a diagram or map identifying anticipated placement of major equipment and other project facilities, including transmission layouts and point of interconnection.
  - <u>Site Control Documents</u>: Attach a copy of all leases, easements or other ownership documentation including to the point of interconnection.
  - <u>Permit Matrix</u>: Attach a comprehensive permit matrix that lists and describes all required permits, including, but not limited to, Federal (USFWS, FAA),



- State, County, City, etc. For each permit, include the status, duration, planned steps, any known mitigation requirements, critical milestones and timelines.
- Environmental Report Summary: Attach a summary of all environmental studies, reports and agency meetings associated with the Project.
- Equipment Warranty Information: Include detailed information regarding the equipment (i.e., wind turbine, solar module, inverter, energy storage resource, etc.) manufacturer's warranty offering including parts and labor coverage and other key terms.
- 7.4. A completed Proposal Bid Pricing (Appendix C).
- 7.5. A completed Bidder's Credit-Related Information and Bidder Profile (Appendix D), which must include:
  - The identity of all persons and entities that have a direct or indirect ownership interest in the Project.
  - Copies of the Annual Reports for the three most recent fiscal years and quarterly reports for the most recent quarter ended, if available.
  - At least three third-party references.
- 7.6. Acknowledgement that the applicable Form PSA is acceptable to Bidder or a comprehensive list of exceptions to the terms and conditions contained in the applicable Form PSA (Appendix E).
- 7.7. Acknowledgement that the applicable AEP Generation Facility Standard and Scope of Work are acceptable to Bidder or a list of any proposed comments or exceptions it takes to the applicable AEP Generation Facility Standard and Scope of Work (Appendix F).
- 7.8. Acknowledgement that the AEP Requirements for Connection of Facilities are acceptable or a list of any proposed exceptions to the AEP Requirements for Connection of Facilities (Appendix G).
- 7.9. All required Resource Analysis / Study Information for the corresponding resource type (Appendix H, Appendix I, Appendix J).
- 7.10. Energy Storage System Option: Bidders providing an alternate Proposal for a Solar energy resource with a co-located energy storage system shall provide this option separate from the base Solar energy resource 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 energy storage system. Any energy storage project offered shall comply with the AEP Design Criteria for Battery Energy Storage Systems Fire Safety (Appendix F). This document will be provided to Bidders subsequent to execution of a CA (See Section 6.2).
- 7.11. A completed Appendix K, which must include:



- Expected Land Lease Costs by year for at least a 35-year operating period. Projects must report all land obligations (e.g., options to lease or purchase land, royalties, easement payments, etc.) to ensure APCo has a full understanding of the all-in costs to support the land rights needed for the Project. Any leases that include revenue-based royalty structures will need to be amended prior to closing any PSA transaction. Land Lease Costs will be used in the Company's Economic Analysis (§8.2.1);
- Estimated decommissioning costs including salvage value. In addition, Bidder shall provide any completed decommissioning studies;
- Expected Property Taxes, including any abatements or payments in lieu of taxes, along with a written description of how such figures were determined and calculated.
- 7.12. Bidder shall provide basic project technical due diligence material (Appendix L).
- 7.13. A completed Appendix M, which must include:
  - Use of Local Goods & Services Plan for the use of local goods or services sourced, in whole or in part, from one or more Virginia or West Virginia businesses in the construction and/or operation of the Project. The bidder should identify these Virginia or West Virginia resources in its proposal. (§3.5).
  - Use of Small & Diverse Suppliers Plan to use reasonable efforts to utilize and adopt a subcontracting plan to use small and diverse suppliers as subcontractors for work (§3.6.8).
  - Environmental Justice 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.
- 7.14. Bidders must ensure that proposals for operational projects contain historical operational information over the last five years (or less if commercial operation date was more recent), including:
  - Commercial operation date
  - Production data (8760) and availability as well as downtime issues and outlook
  - Congestion and curtailment
  - Environmental issues and violations
  - Safety issues
  - NERC violations and resolution
  - Major scheduled and unscheduled maintenance matters as well as resolution
  - Community relations and external affairs issues
  - Detailed annual operations budgets, including forecasted versus actual budgets



- Environmental and permitting summary
- List and description of any outstanding legal matters
- Facility Site Plan and General Arrangement
- List of all warranties
- Staffing
- Summary of material contracts (including, but not limited to, PJM interconnection agreement, operations and maintenance agreements, site control documents, etc.) and confirmation that the project is in compliance with all such contracts
- Confirmation of whether the project holds firm transmission service
- Property tax abatements and/or payments in lieu of taxes
- Description of the tax qualification strategy used to secure Federal Tax Credits for the project

#### 8. 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 three phases, is central to the success of APCo's RFP process.

Section 8.1: Eligibility and Threshold Requirements

Section 8.2: Detailed Analysis Section 8.3: Final Project Selection

- 8.1. <u>Eligibility and Threshold Requirements:</u> A preliminary screening of each Proposal will be undertaken by the Company to determine if the Proposal is eligible to proceed to the Detailed Analysis phase. Bidders and their associated Proposals must satisfy the following Eligibility and Threshold Requirements:
  - 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 12/15/2026 (§3.2).
  - 8.1.3. Project must have a minimum nameplate rating of 50 MWac (§3.3).
  - 8.1.4. Projects must be physically located in the PJM Interconnection L.L.C. Region (e.g., interconnect to the PJM Transmission system) (§3.4).
  - 8.1.5. Bidder must have established substantial Site Control (§3.6.1).
  - 8.1.6. Solar Projects: Solar panels and inverters must be manufactured by approved vendors in the AEP Generation Facility Standard for Solar Facilities (§3.6.2).



- 8.1.7. Wind Projects: Turbines must be manufactured by GE, Vestas, or Siemens-Gamesa (§3.6.2).
- 8.1.8. Resource Information: Bidder must submit all required Resource Studies / Information listed in Appendix H (Solar), Appendix I (Wind), Appendix J (Energy Storage) for the proposed resource type (§3.6.3 §3.6.5).
- 8.1.9. New Solar and Wind Projects must have a minimum design life of 30 years and Energy Storage Projects must have a minimum design life of 20 years. Operational Wind and Solar Projects must have a minimum of 10 years of operational life remaining based on initial design standards (§3.6.6).
- 8.1.10. Bidder must have a completed PJM System Impact Study (§3.7.1) which remains active in the PJM queue.
- 8.1.11. Bidder is required to include requested financial information (Appendix D) so that the Company's credit department can conduct a financial wherewithal assessment. The Proposal Bid Price shall include any costs associated with meeting the credit requirements stated in the Form PSA (§4.2.6).
- 8.1.12. Proposal Bid Price shall not be contingent upon an operations and maintenance agreement for the Project (§4.3).
- 8.1.13. 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 (§6.2).
- 8.1.14. 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 (§7.6).
- 8.1.15. Proposal must include detailed exceptions, if any, to the applicable AEP Generation Facility Standard and Scope of Work in Appendix F. (§7.7).
- 8.1.16. Bidder must address Environmental Justice requirements (§7.13).
- 8.1.17. The Company reserves the right to reject any Proposal which proceeded to the Detailed Analysis phase but which is subsequently determined by the Company not to satisfy the Eligibility and Threshold Requirements.
- 8.2 <u>Detailed Analysis</u>: Proposals meeting the Eligibility and Threshold Requirements in §8.1 will move to the Detailed Analysis phase, which is comprised of the Economic Analysis and the Non-Price Factor Analysis set forth below.



- 8.2.1 <u>Economic Analysis:</u> During the Economic Analysis phase, the Company will use three key price evaluation metrics for each of the Proposals:
  - 8.2.1.1 Levelized Adjusted Cost of Energy (LACOE): The Company will determine a LACOE by adding together (a) the Levelized Cost of Energy (LCOE) associated with each Proposal as calculated by the Company and (b) the expected cost of Transmission Congestion as determined by the Company's Transmission Screening Analysis. The Transmission Screening Analysis will evaluate (i) transmission facilities cost contingency and network upgrade cost allocation contingency for projects without a Facilities Study and (ii) the expected cost of transmission congestion and losses.

The LCOE calculation is based on the Proposal's Bid Price, Expected Annual Energy, Operations and Maintenance Costs (including Land Lease costs), and applicable Federal Tax Credits. In addition, other costs may be included based on the Company's discretion to appropriately evaluate each Proposal.

- 8.2.1.2 Levelized Adjusted Net Cost of Energy (LANCOE): The Company will calculate the LANCOE by taking the difference between (a) the levelized forecasted PJM revenues for the Proposal's energy plus the forecasted value of the Proposal's capacity and renewable energy certificates in the PJM market, and (b) the LACOE for each Proposal.
- 8.2.1.3 Value to Cost Ratio (V/C): The Company will calculate the V/C by dividing (a) the levelized forecasted PJM revenues for the Proposal's energy plus the forecasted value of the Proposal's capacity and renewable energy certificates in the PJM market by (b) the LACOE for each Proposal.
- 8.2.2 <u>Non-Price Factor Analysis:</u> The Non-Price Factor Analysis will be comprised of the following factors:
  - 8.2.2.1 Project's (including associated transmission and interconnection facilities) impact on wildlife, the environment and other natural and cultural resources;
  - 8.2.2.2 Project's (including associated transmission and interconnection facilities) impact on Environmental Justice and Fenceline communities;
  - 8.2.2.3 Bidder's exceptions to the Form PSA. The Company will review the exceptions the Bidder proposed to the Company's form agreement with a focus on risks or additional costs to the Company. Prior agreement by AEP in previous negotiations does not constitute acceptance of an exception;
  - 8.2.2.4 Bidder's exceptions to the applicable AEP Generation Facility Standard and Scope of Work;



- 8.2.2.5 Development status of the Project including, but not limited to, permitting, transmission and interconnection facilities and constructability;
- 8.2.2.6 Bidder's ability to meet contractual credit requirements through the review of recent financial statements, ability to post collateral and raise capital, and any other relevant financial information including current credit ratings will also be assessed;
- 8.2.2.7 Community relations and economic development considerations, including Bidder's plan to use small and diverse suppliers as subcontractors;
- 8.2.2.8 Bidder's use of Virginia or West Virginia sourced goods or services or Virginia, West Virginia or United States-based manufacturers using materials or product components made in Virginia, West Virginia or the United States.
- 8.3 <u>Final Project Selection:</u> APCo will consider bids that are reliable, feasible and represent a reasonable cost means of satisfying the requirements of this RFP. Based on the results of the Detailed Analysis described above, the Company will determine which Projects will be included in the Final Project Selection. The Company will notify Bidders whether or not their Proposal has been selected and negotiation of definitive agreements will commence with Bidders whose Proposals have been selected.

#### 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. <u>General RFP Questions:</u> All correspondence and questions regarding this RFP, with the exception of interconnection-related questions, should be directed to:

APCo2023RFP@aep.com

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

**PJM Interconnection** 



## Appendix A

## **Proposal Content Check Sheet**

Section	Item	Completed
7.2	Executive Summary	
7.3	Appendix B (Project Summary)	
	- Completed Electronic Project Summary Form (Link in Box Site)	
	- Company & Project Information	
	- Interconnection (PJM)	
	- Site Information	
	- Permits	
	- Preliminary Site Questions	
	- Bidder Projects Completed	
	- Energy Storage Projects Completed, if applicable	
	Attachments Required:	
	- PTC/ITC Strategy	
	- Interconnection Studies	
	- Site Layout	
	- Site Control Documents	
	- Permit Matrix	
	- Environmental Report Summary	
	- Equipment Warranty Information	
7.4	Appendix C (Proposal Bid Pricing)	
7.5	Appendix D (Bidder's Credit Related Information)	
7.6	Appendix E (Exceptions to Form Purchase and Sale Agreement)	
7.7	Appendix F (Exceptions to AEP Generation Facility Standard)	
7.8	Appendix G (Exceptions to AEP Req. for Connection of Facilities)	
7.9	Appendix H (Solar Resource Information), if applicable	
	Appendix I (Wind Resource Analysis / Study), if applicable	
	Appendix J (Energy Storage Resource Information), if applicable	
7.11	Appendix K (Projected Land Lease / Decommissioning Costs / Property Taxes)	
7.12	Appendix L (Project Technical Due Diligence Material)	
7.13	Appendix M (Local Goods & Services / Small & Diverse Suppliers / Environmental Justice)	
7.14	For Operational Projects: All Information Requested in Sec. 7.14	



## Appendix B

## **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 $(Y / N)$ ?			
If so, please identify all partners, joint ventures, members, or other entities or persons comprising same:			

**General Project Information** 

Project Name:
Resource Type (e.g., Wind, Solar):
Project Site Location (County, State):
Expected Commercial Operation Date:
Indicate if Project has substantial site control including to Point of Interconnection $(Y \ / \ N)$ :
Indicate if Project will qualify for Federal Production Tax Credit or Investment Tax Credit and the applicable percentage (%):
Indicate if Project will comply with Prevailing Wage and Apprenticeship Requirements (PWAR) (Y / N):

**Solar Project Information (if applicable)** 

Refer to Appendix B (Attachments Required) for PTC/ITC Strategy requested.

= - J · · · = - · · · · · · · · · · · · · · ·			
Module Manufacturer / Model:	Annual Degradation (%):		
Configuration (Fixed Tilt / Single Axis):	Design Life (Yrs.):		
Inverter Manufacturer / Model:	Remaining Useful Life if Operational (Yrs.):		
Solar Project Nameplate (MWac): Solar Project Nameplate (MWdc):	Expected Annual Availability (%):		
Expected Annual Energy (MWh):	Capacity Factor (%):		
Refer to Appendix H (Solar Resource Information) for additional solar information requested.			



Wind Project Information (if applicable)

Wind Turbine Manufacturer:	Model:	
Wind Project Nameplate (MWac):	Design Life (Yrs.):	
Number of Turbines:	Remaining Useful Life if Operational (Yrs.):	
Independent Wind Resource Study Included (Y / N):	Source of Independent Wind Resource Study:	
Expected Annual Energy (MWh): Capacity Factor (%):		
Year 1 Expected Annual Energy (MWh) <sup>1</sup> :	Year 1 Capacity Factor (%) <sup>1</sup> :	
Note 1: Year 1 production data is required to account for potential lower Year 1 production due to routine maintenance associated with the break-in period.		
Refer to Appendix I (Wind Resource Analysis/Study) for additional wind information requested.		

**Energy Storage Option Information (if applicable)** 

Storage Resource Description:
Storage Project Nameplate Rating (MWac):
Storage Project Winter Rating (MWac):
Storage Project Summer Rating (MWac):
Storage Project PJM Capacity Value (MWac):
Nameplate rating (MWac) of the co-located energy storage system as a percentage of the nameplate rating (MWac) of the Solar energy resource (%):
Duration (Hours):
Economic Life (Years):
Refer to Appendix J (Energy Storage Resource Information) for additional information requested.

**Interconnection (PJM)** 

PJM Queue #:	Substation Name / Voltage:
Transmission Provider:	
Point of Interconnection with:	
Feasibility Study Complete (Y / N):	Feasibility Study Report Date:
System Impact Study Complete (Y / N):	System Impact Study Report Date:
Facilities Study Complete (Y / N):	Anticipated Facilities Study Completion Date:
PJM Interconnection Status (describe):	
Refer to Appendix B (Attachments Red	quired) for Interconnection Studies requested.



## **Site Information**

Site Legal Description:			
Address:			
City:	State:		Zip Code:
County:	Latitude:		Longitude:
Site Control (lease, easement, own, site purchase pending, etc.):			
Site Acres Required:		Site Acres Secured:	
Is there potential for expansion (Y / N):		If yes, acres available:	
Refer to Appendix B (Attachments Required) for Site Layout and Site Control Documents requested.			

## **Permits**

Has Bidder contacted all required permitting agencies and identified all permits for project?
Local (City/County) (Y / N):
State (Y / N):
Federal (Y / N):
Wildlife Resources (Federal, State, etc.) (Y / N):
Other (Y / N):
Refer to Appendix B (Attachments Required) for the Permit Matrix requested.

**Preliminary Site Questions (Y/N)** 

Has the site been assessed for any environmental contamination? Describe any known environmental issues on a separate attachment.	
Are there any Tribal Lands or Tribal mineral ownership rights within Project boundary or vicinity?	
Are there any Federal or State owned or controlled lands within Project boundary or vicinity?	
Is the Project located on currently or formally mined lands?	
Is the site adjacent or near an Environmental Justice or Fenceline community?	
Have any Federal or State wildlife resource agencies been consulted for the Project?	
Has The Nature Conservancy or any non-governmental environmental organizations been engaged?	
Are there Conservation Reserve Program, Wetland Reserve Program or other conservation easements within the Project boundary or vicinity?	
Are there any pollinator vegetation requirements associated with the project?	
Is there any Federal nexus to the Project, including Federal loans?	
Refer to Appendix B (Attachments Required) for the Environmental Report Summary requ	uested.



### **Bidder Projects Completed**

Provide a summary of all wind and/or solar projects (≥ 50 MWac) that Bidder has successfully developed and completed in the United States or Canada. For each project, describe the Bidder's specific role in the project.

Project	Resource	Location	MW	COD	Bidder's Role

B - 4

Total MW =



## **Energy Storage Projects Completed**

Provide a summary of all energy storage projects (≥ 5 MWac) that Bidder has successfully developed and completed in the United States or Canada. For each project, describe the Bidder's specific role in the project.

Project	Resource	Location	MW	COD	Bidder's Role
		Total MW =			



#### **Attachments Required**

<u>PTC/ITC Strategy:</u> Summary of how the Project will qualify for Federal Tax Credits (e.g., PTCs or ITCs) including:

- A detailed description of how Projects intend to comply with PWAR tied to full value Federal Tax Credits provided under the Inflation Reduction Act. This includes the Bidder's process and tools (e.g., software) for collecting, organizing, and retaining sufficient records to establish compliance with PWAR and ability to timely deliver records for review during a Project. These records are expected to provide information necessary to make a determination as to whether the Project satisfies PWAR as detailed in IRS Notice 2022-61 and subsequent guidance.
- Detailed information regarding the Project's ability to qualify for bonus credits provided under the Inflation Reduction Act (i.e., Domestic Content Bonus Credit and Energy Community Bonus Credit).

<u>Interconnection Studies:</u> Include a copy of all completed interconnection studies (i.e., System Impact Study, Facilities Study, etc.).

<u>Site Layout:</u> Attach a diagram or map identifying anticipated placement of major equipment and other project facilities, including transmission layouts and Point of Delivery.

<u>Site Control Documents:</u> Attach a copy of all leases, easements or other ownership documentation including to the point of interconnection.

<u>Permit Matrix:</u> Attach a comprehensive permit matrix that lists and describes all required permits, including, but not limited to, Federal (USFWS, FAA), State, County, City, etc. For each permit, include the status, duration, planned steps, any known mitigation requirements, critical milestones and timelines.

<u>Environmental Report Summary:</u> Attach a summary of all environmental studies, reports and agency meetings associated with the Project. Summarize the following reports (including data summaries, results and findings) as applicable, which will be requested at a later time, including, but not limited to:

• Critical Issues Analysis, Site Characterization Assessment, Environmental Work / Survey Plan, Federal / State Rare, Threatened or Endangered Species Assessments and Surveys, Bat Acoustic Survey Report, Avian Use Survey Report, Raptor Nest Survey Report, Prey-based Survey Report, Wetland and Waters Delineation / Assessment Report, Phase I Environmental Site Assessment Report, Historical and Cultural Resource Survey / Assessment Report, All Other Environmental Resource Surveys, Assessments and Study Reports, Record and Notes of all Federal and/or State Resource Agency Correspondence and Meetings, Environmental Justice Analyses, Aviation / FAA and Glare Studies, Radar Study, Noise and Shadow Flicker Study, Associated Project Infrastructure and Environmental Resource Shapefiles (.kmz format), and Bird and Bat Conservation Strategy and Eagle Conservation Plan (if available).

<u>Equipment Warranty Information</u>: Include detailed information regarding the equipment (i.e., wind turbine, solar module, inverter, energy storage resource, etc.) manufacturer's warranty offering including parts and labor coverage and other key terms.



## Appendix C

Project Name	oposai Bia Pricing
110geet 1 tuille	
<b>Expected COD by</b>	
<b>Equipment Manufacturer</b>	
<b>Expected Annual Energy (MWh)</b>	
Capacity Factor (%)	
Bid Price (\$)	
Does Bid Price include use of union	labor (Y/N)?
Does Bid Price include an O&M bui	lding (Y/N)?
Does Bid Price take into consideration for Connection of Facilities (Appendix	<u> </u>
Alternate Proposal Bid Prici	
	ng (Base Proposal w/ Energy Storage Option)
Project Name	ng (Base Proposal w/ Energy Storage Option)
Project Name Expected COD by	ng (Base Proposal w/ Energy Storage Option)
Project Name Expected COD by Equipment Manufacturer	ng (Base Proposal w/ Energy Storage Option)
Project Name Expected COD by Equipment Manufacturer Expected Annual Energy (MWh)	ng (Base Proposal w/ Energy Storage Option)
Project Name Expected COD by Equipment Manufacturer	ng (Base Proposal w/ Energy Storage Option)
Project Name Expected COD by Equipment Manufacturer Expected Annual Energy (MWh) Capacity Factor (%)	ng (Base Proposal w/ Energy Storage Option)
Project Name Expected COD by Equipment Manufacturer Expected Annual Energy (MWh) Capacity Factor (%)	
Project Name Expected COD by Equipment Manufacturer Expected Annual Energy (MWh) Capacity Factor (%) Bid Price (\$)	labor (Y/N)?



## **Appendix D**

#### **Bidder's Credit-Related Information**

Full Legal Name of the Bidder:
Type of Organization (Corporation, Partnership, etc.):
Bidder's % Ownership in Proposed Project (as of proposal submittal date):
If Bidder's Ownership is <100%, identity of all persons and entities that have a direct or indirect ownership interest in the 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 of Credit Support Provider:
Current Senior Unsecured Debt Rating (if unavailable, Issuer Rating):
1. S&P:
2. Moody's:
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

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:



## **Bidder Profile**

Please list Bio	dder's Affiliate companies:
1.	
2.	
3.	
4.	
Please list Bio	dder's references:
1. Comp	any:
	Contact Name:
b.	Contact Number:
	Project:
2. Comp	any:
	Contact Name:
b.	Contact Number:
c.	Project:
2 0	
3. Com	
	Contact Name:
	Contact Number:
c.	Project:
4. Comp	anv·
	Contact Name:
b.	
c.	Project:
<b>.</b>	



## Appendix E

#### **Exceptions to Form Purchase and Sale Agreement**

See Section 6.2 for instructions to obtain the applicable Form Purchase and Sale Agreement.

Bidder must provide acknowledgement that the Form Purchase and Sale Agreement (PSA) is acceptable or a compressive list of exceptions to the terms and conditions contained in the applicable Form PSA.



## Appendix F

#### **Exceptions to AEP Generation Facility Standard**

See Section 6.2 for instructions to obtain the applicable AEP Generation Facility Standard and Scope of Work.

- Wind: GEN-4560 Wind Projects Technical Spec Rev 8
- Solar: GEN-4550 Solar Projects Technical Spec Rev 13
- Energy Storage:
  - o GEN-4570 BESS Technical Spec Rev 5
  - o DC-FP-BATT BESS Fire Safety Rev 1
- Scope of Work

Bidder must provide acknowledgement that the applicable AEP Generation Facility Standard and Scope of Work are acceptable or a list of any proposed comments or exceptions it takes to the applicable AEP Generation Facility Standard and Scope of Work.



## Appendix G

#### **Exceptions to 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\_Rev4.pdf

Bidder must provide acknowledgement that the AEP Requirements for Connection of Facilities are acceptable or a list of any proposed exceptions to the AEP Requirements for Connection of Facilities.



## **Appendix H**

#### **Solar Resource Information**

- 1. Bidder must provide the source and basis of the solar irradiance data (e.g., PVSyst or comparable energy modeling output) used in the development of energy projections for the Project. Explain all assumptions used in forecasted generation calculations.
- 2. Bidder must provide the PVsyst .PAN and .OND files.
- 3. Bidder must populate the data required in the Company's "Solar Modeling Input Sheet" spreadsheet (see Section 6.2 for instructions to obtain this document).
- 4. Bidder must populate the 8760 calendar year hourly energy forecast, net of all losses using the Company's "Energy Input Sheet" spreadsheet (see Section 6.2 for instructions to obtain this document).
- 5. Bidder must provide manufacturer data sheets for the Project's solar modules, inverters, racking, and tracking system.
- 6. If Bidder has not finalized the solar module manufacturer, they must identify the module options and provide the applicable production data (Expected Annual Energy, Capacity Factor) for each module manufacturer.
- 7. Bidder must provide the Project Layout along with the contour and elevation data in CAD format.



## Appendix I

#### Wind Resource Analysis / Study

- 1. Attach the independent wind energy report
  - a. Wind report shall also include P50, P75, P90, P95 and P99 production estimates with 1, 5, 10, 20 and 30 year timeframes
  - b. Independent consultant information (resume, contact information) if not included in the wind energy report.
- 2. Describe on-site meteorological campaign including:
  - a. Number of met towers
  - b. Height of met towers
  - c. Remote sensing (lidar and/or sodar)
  - d. Number of years of data for each tower / remote sensing device.
- 3. Identify any wind direction sector management or other operation restrictions.
- 4. Experience of developer in PJM. Identify the number of projects, years each project has been operating, turbine models and capacity rating.
- 5. 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.
- 6. Wind turbine power curve adjusted for the site's specific air density.
- 7. Provide a description of the system intended to provide real-time telemetry data.
- 8. Attach an 8760 calendar year hourly energy forecast, net of all losses (See Section 6.2 for instructions to obtain the Company's "Energy Input Sheet" spreadsheet)
- 9. 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.

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

#### **Energy Storage Resource Information**

See Section 6.2 for instructions to obtain any of the documents identified below:

1. Bidder must populate the data required in the Company's "Energy Storage Design Criteria Data Sheet" spreadsheet if providing an alternate Proposal for a co-located energy storage system.



## Appendix K

#### **Projected Land Lease / Decommissioning Costs / Property Taxes**

See Section 6.2 for instructions to obtain any of the documents identified below:

- 1. Bidder must populate the data required in the Company's "Project Land Decom Property Taxes" spreadsheet. Information provided shall include:
  - a. Expected Land Lease Costs by year for at least a 35-year operating period. Projects must report all land obligations (e.g., options to lease or purchase land, royalties, easement payments, etc.) to ensure APCo has a full understanding of the all-in costs to support the land rights needed for the Project. Any leases that include revenue-based royalty structures will need to be amended prior to closing any PSA transaction. Land Lease Costs will be used in the Company's Economic Analysis (§8.2.1).
  - b. Estimated decommissioning costs including salvage value. In addition, Bidder shall provide any completed decommissioning studies.
  - c. Expected Property Taxes, including any abatements or payments in lieu of taxes, along with a written description of how such figures were determined and calculated.



## Appendix L

#### **Project Technical Due Diligence Material**

Bidders must provide the following basic technical due diligence material to allow the Company to perform an initial technical due diligence of the Project.

- 1. <u>Preliminary Site Layout</u>: Provide a diagram or map identifying anticipated placement of major equipment and other project facilities, including project gen-tie line, point of interconnection, and project access roads.
- 2. <u>Preliminary Electrical One Line</u>: Provide a preliminary substation and collector system electrical one-line diagram of the Project.
- 3. <u>NERC Compliance Description</u>: If the proposed Project site and equipment is defined as an Element of the Bulk Electric System, provide a description or plan for compliance to the applicable standards (if one is available prior to the Proposal Due Date).
- 4. Quality Control Plan: Provide a description or a quality control plan from a recent project for major equipment supplier surveillance (i.e., fabrication inspections and testing) and solar and/or wind facility construction (i.e., inspections and testing).
- 5. <u>Proposed Relay Protection Scheme</u>: Provide a description or a relay protection oneline diagram of the project substation relay protection schemes including gen-tie to the point of interconnect (if one is available prior to the Proposal Due Date).
- 6. <u>SCADA Network One Line</u>: Provide a description or a block diagram of the SCADA and communication network configuration and a description of cyber security features.
- 7. <u>Main Power Transformer</u>: Provide a description and the manufacturer of the main power transformer included in the Proposal.
- 8. <u>Geotechnical Reports</u>: Provide copies of all completed geotechnical reports and accompanying data and attachments (if available prior to the Proposal Due Date).



## Appendix M

#### **Local Goods & Services**

Local Goods & Scrvices
Describe how the Bidder will be using local goods or services sourced whole or in part from
one or more Virginia or West Virginia businesses, as applicable, to the extent practical in the
purchase of equipment and material, or services for the Project.
Use of Small & Diverse Suppliers
Use of Small & Diverse Suppliers
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work
Describe Bidder's plan to use small and diverse suppliers as subcontractors for work

M - 1



## **Environmental Justice**

Provide 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. In addition, complete and
include an EPA EJScreen Report using the EJScreen Tool ( <a href="https://www.epa.gov/ejscreen">https://www.epa.gov/ejscreen</a> ), or
if the project is located in Virginia, refer to the Virginia Environmental Data Hub
(https://geohub-vadeq.hub.arcgis.com).