American Public Power Association Request for Proposal: American Public Power Association and Department of Energy Cooperative Agreement DE-CR0000007 OT Security Technology Selection and Deployment

Request for Proposal

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1 Invitation to Submit Proposal

- The American Public Power Association (APPA) is soliciting proposals for a vendor(s) to assist and support the Deployment of OT Security Technologies and Systems. Efforts under this task should focus on supporting the objective of APPA's Cooperative Agreement with the U.S. Department of Energy (DOE); specifically APPA will refine existing, but disparate, operational technology (OT) cybersecurity models, frameworks, and monitoring criteria into more uniform hardware specifications and guidance to facilitate improved deployment at small- and medium-sized public power utilities.
- 2. The effect of success from this task will be reducing or eliminating uncertain costs, lowering the organizational capacity required to deploy technology, and expediting procurement and installation of associated technologies and systems.
- 3. Responses to this RFP will be coordinated by APPA and at the end of the process, individual contracts will be executed between APPA Member Public Power Utilities and Vendor(s).

2 American Public Power Association

- 1. APPA serves over 2,000 community-and state-owned electric utilities. APPA provides representation, information, counseling, and other services in the areas of:
 - Federal rules and regulations
 - Engineering and operations
 - Accounting and finance
 - Marketing trends
 - New technologies
 - Human resources
 - Customer services
 - Energy research
 - Communications
 - Energy services
- 2. APPA has been working in partnership with the nation's public power systems since its founding in 1940. Its mission is to help these systems increase productivity, control rates, protect their community's investment in public power, and enhance their ability to compete.
- 3. The public power sector of the electric utility industry consists of over 2,000 publicly owned utilities in 49 states; Puerto Rico; the Virgin Islands; the Mariana Islands; Guam; and American Samoa.
- 4. Many of these systems are owned by municipalities, while others are owned by states, counties, public utility districts, and the U.S. Government.

- 5. Locally owned electric utilities serve communities ranging in size from Radium, Kansas, consisting of about 25 customers, to Los Angeles, California, with over 1.4 million customers.
- 6. The majority of publicly owned electric utilities are located in communities with populations of 10,000 or less. Nationally, public power serves approximately 15 percent of all U.S. customers.

4 Statement of Work

4.1 Project Overview

- APPA has partnered with DOE, and has signed Cooperative Agreement DE-CR0000007 under which The American Public Power Association (APPA) will utilize its unique capabilities and position as a convener of community-owned electric utilities to work with DOE's Office of Cybersecurity, Energy Security, and Emergency Response (CESER), as well as the National Energy Technology Laboratory (NETL), to develop, demonstrate, and deploy cyber and cyber-physical OT solutions within the public power community.
- 2. To do this, APPA will coordinate with state, local, tribal, territorial and federal entities that own and operate electric utilities as well as with supporting joint action agencies.
- 3. APPA will also work to form bridges to and between cybersecurity organizations, including cybersecurity information sharing and analysis centers, third-party vendors, and non-profit cybersecurity organizations.
- 4. In particular, APPA will form national support infrastructure and communities to assist with the deployment, maintenance, training, and evaluation of cyber and cyber-physical solutions for small- and medium-sized municipal (public power) utilities.

4.2 Approach

- Currently, small to medium sized utilities do not have a common terminology to describe the OT network monitoring solutions needed to make informed purchasing decisions. Also, there is no standardized baseline hardware specification for municipal utilities to use in evaluating OT cybersecurity solutions that can be scaled to be effective for their business model and network architecture.
- 2. Traditional intrusion detection and monitoring technologies are not well suited to be widely deployed inside an Industrial Control System (ICS) environment. Anomaly- and signature-based intrusion detection system (IDS) technologies have developed methods to cover information technology-based network activity and protocols effectively. However, these technologies do not necessarily include the fine-grain protocol decoders required to ensure network security inside an ICS environment containing proprietary and/or weak protocols, such as those lacking authentication and encryption.
- 3. The process identifying these RFP requirements was based on several organizational objectives and desired outcomes established by APPA and its members, along with

the guidelines established in the National Institute of Standards and Technology (NIST) Cybersecurity Framework, including NIST SP 800-53 R5, NIST SP 800-82, and NIST SP 800-94; International Society of Automation (ISA) 62443 series of standards and technical reports; and various Government, industry, and academic studies.

- 4. This project will collect data from participating public power utilities to inform the development of a set of specifications for the deployment of operational technology (OT) cybersecurity systems on public power utility networks. Building on these specifications, the project will collect additional data from participating public power utilities that field test various commercial, pre-commercial, and new OT cybersecurity technologies to evaluate whether these technologies meet the specifications and needs of the public power community. Finally, the project will deliver a series of procedures and documents on how to establish a secure information sharing and threat intelligence system, including the legal frameworks required to manage data ownership and how to manage threat feeds to small and medium-sized public power utilities.
- 5. This project will increase visibility of internal utility networks for utility-controlled OT Cybersecurity defense.
- 6. This project will enable member utility participants to anonymously deliver threat data from deployed hardware to cybersecurity information sharing analysis centers to perform deep analysis and to receive timely and actionable and consumable OT threat data and mitigation recommendations.
- 7. An architecture approach is employed to determine the fit of proposed technologies in a representative set of Architectures. The use of Representative Architectures is intended to aggregate and evaluate standardized deployment execution strategies and methods offered by each technology. Identifying technology solutions that are optimized for each of these Representatives Architectures allows for standardized deployment at scale and will lower the organizational capacity required to deploy OT Cybersecurity Technology.
- 8. The various accomplishments and deliverables resulting from this RFP are described below. These accomplishments and deliverables apply initially to Pilot Deployments to Early Adopters. These deliverables are further expected to provide the foundation for scaling up as rapidly as practical additional deployments under the Cooperative Agreement, as well as being leveraged by additional utility deployments outside the scope of this specific Cooperative Agreement.

- 4.3 Accomplishments/Deliverables Resulting from RFP
- 4.3.1 Technology Selection
- 4.3.2 Vendor Qualification
- 4.3.3 Standardized Lightweight Contracts
- 4.3.4 Standardized Pricing Models
- 4.3.5 Standardized Payment Models
- 4.3.6 Deployment Execution Strategies and Methods
- 4.3.7 Executed Contracts
 - 1. Contracts for Pilot Deployments to Early Adopters (between 2 and 6 utilities).
- 4.3.8 Deployments to Public Power Utilities
 - 1. Pilot Deployments to Early Adopters.
 - 2. Deployments to additional Cooperative Agreement Candidates.
 - 3. Deployments to other Member Utilities using artifacts and Award Packages developed under this RFP.
- 4.3.9 Enhanced Member Capability to Deploy Cybersecurity Technology
 - 1. Standardized deployment scripts, training, configurations, etc.

4.4 Scope of Work

- Contracts will be executed between individual member utilities using Award Packages created by APPA and Member Utilities through this RFP under the Cooperative Agreement.
- 4.4.1 OT Cybersecurity Technologies
- 4.4.2 Deployment/Implementation/Integration Services
- 4.4.3 On-going Support Agreements and Subscriptions

4.5 Deliverables/Milestones

- 4.5.1 Pilot Deployments to 2 6 Early Adopters
 - 1. Start: On or about August 9, 2021.
 - 2. Finish: >= 30 and <=45 days after Start.
- 4.5.2 Deployments at an additional 6 10 Utility Participants
 - Start: No sooner than completion of evaluation and lessons learned from Pilot Deployments for Enhancing Member Capability to Deploy Cybersecurity Technology.
 - 2. Finish: No later than 2/28/22.

- 5 Notice to Prospective Offerors
- 5.1 APPA RFP Contact Information
 - 1. APPA RFP Coordinator:
 - a. Richard Condello
 - b. rcondello@publicpower.org
- 5.2 RFP Process
- 5.2.1 APPA Issues RFP on or about June 11, 2021
- 5.2.2 APPA Webinar on the RFP at 2:00 2:30 PM ET June 16, 2021
 - 1. Potential bidders can register for the Webinar at: <u>https://publicpower.zoom.us/webinar/register/WN_WfCfj0bkRJ6v82uirv8VkA</u>
 - 1. APPA will provide an overview of the RFP and will address any questions formally received prior to the Webinar time and date.
 - 2. A recording of this RFP overview session will be made available via SharePoint to all attendees and any bidders that contacted us with an intent to bid.
- 5.2.3 Bidders Execute APPA Nondisclosure Agreement by 5 PM ET on June 18, 2021
- 5.2.4 Bidders Assert Intent to Bid by 5 PM ET on June 18, 2021
- 5.2.5 APPA Provides Specific RFP Requirements to Bidders on June 21, 2021
 - 1. APPA will only provide RFP Evaluation Requirements to Bidders with an Executed NDA and an Intent to Bid.
- 5.2.6 Bidders Submit Questions by 5 PM ET on June 25, 2021
- 5.2.7 APPA Responds to Questions by 5 PM ET on July 2, 2021
- 5.2.8 Bidders Submit Proposals by 5 PM ET on July 12, 2021
- 5.2.9 APPA Conducts Post-Bid Conferences Beginning July 13, 2021 to August 6, 2021
 - 1. Time / Date for each bidder to be determined solely by APPA.
 - 2. At the time of scheduling, APPA will provide the applicable instructions and protocols.
- 5.2.10 APPA Completes Evaluations by August 6, 2021
- 5.2.11 APPA and Utilities Execute Participation Agreements by August 6, 2021
- 5.2.12 APPA Provides Award Packages to Utilities by August 6, 2021
- 5.2.13 Utilities Execute Contracts with Vendor(s) on or about August 6, 2021
- 5.2.14 APPA, Utilities, Vendor(s) and Partner(s) Deploy OT Cybersecurity Systems
 - 1. Pilot Deployments to Early Adopters
 - a. Start: On or about August 16, 2021
 - b. Finish: >= 30 and <=45 days after start
- 5.2.15 APPA Evaluates Member Capability to Deploy Cybersecurity Technology
 - 1. Lessons learned and revised processes, specification as needed by

30 days after completion of Pilot Deployments to Early Adopters.

6 Instructions to Bidders

6.1 General Instructions

- Bidders execute APPA Nondisclosure Agreement (Included in Section 12) before 5:00 PM ET on June 18, 2021
 - a. Send executed NDA via email to <u>OTCyberDefense@publicpower.org</u> CC: <u>rcondello@publicpower.org</u>; <u>cching@publicpower.org</u>.
 - Any questions on APPA NDA should be directed to APPA's Legal Counsel at <u>OTCyberDefense@publicpower.org</u> CC: <u>rcondello@publicpower.org</u>; <u>cching@publicpower.org</u>.
- 2. Bidders submit Intent to Bid by 5:00 PM ET on June 18, 2021
 - a. Send notice of Intent to Bid via email to <u>OTCyberDefense@publicpower.org</u> CC: <u>rcondello@publicpower.org</u>; <u>cching@publicpower.org</u>.
 - b. By sending this notice with bidder contact email, bidder will be notified by APPA if any changes are made to this RFP.
- 3. Bidders may submit questions any time until 5:00 PM ET on June 25, 2021
 - a. Send questions via email to <u>OTCyberDefense@publicpower.org</u> CC: <u>rcondello@publicpower.org; cching@publicpower.org</u>
 - APPA will consolidate and respond to all questions by 5:00 PM ET on July 1, 2021.
 - c. Any questions received after 5:00 PM ET on June 26, 2021 will be answered at APPA's sole discretion by 5:00 PM ET on July 2, 2021.
 - d. APPA may Issue Addenda.
- 4. Applicants must submit through email an electronic version of the proposal on or before 5:00 PM ET on July 12, 2021 to <u>OTCyberDefense@publicpower.org</u> CC: <u>rcondello@publicpower.org</u>; <u>cching@publicpower.org</u>
 - a. Email Subject Line Labeling
 - i. Vendor Name
 - ii. "Response to APPA OT Cybersecurity Technology Selection and Deployment RFP"

6.2 Vendor Representations and Authorizations.

Each Vendor by submitting its proposal understands, represents, and acknowledges that:

 All information provided by, and representations made by, the Vendor in the proposal are material and important and will be relied upon by Member Utilities in awarding contracts. Any misstatement shall be treated as fraudulent concealment from APPA and Member Utilities of the true facts relating to the submission of this proposal.

- 2. The price(s) and amount of this proposal have been arrived at independently and without consultation, communication or agreement with any other Vendor or potential Vendor.
- 3. Neither the price(s) nor the amount of the proposal, and neither the approximate price(s) nor the approximate amount of this proposal, have been disclosed to any other firm or person who is a Vendor, and they will not be disclosed on or before the proposal submission deadline specified in this solicitation.
- 4. No attempt has been made or will be made to induce any firm or person to refrain from submitting a proposal on this contract, or to submit a proposal higher than this proposal, or to submit any intentionally high or noncompetitive proposal or other form of complementary proposal.
- 5. The proposal is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive proposal.
- 6. The Vendor has not, under separate contract with APPA, made any recommendations to APPA concerning the need for the services described in the proposal or the specifications for the services described in the proposal.

6.3 Disclosure of Proposal Contents

- 1. All responses and materials submitted with proposals become the property of APPA and may be returned only at the APPA's discretion.
- 2. Proposals will be held in confidence and will not be revealed or discussed with competitors, unless disclosure is required to be made
 - a. under the provisions of any Commonwealth or United States statute or regulation; or
 - b. by rule or order of any court of competent jurisdiction.
- 3. Proposals submitted to APPA may be reviewed and evaluated by any person other than competing Vendors at the discretion of APPA.
- 4. APPA has the right to use any or all ideas presented in any proposal.
- 5. Selection or rejection of the proposal does not affect this right.
- 6. However, material of a proprietary nature will not be disclosed beyond APPA and its representatives, unless required by law.

6.4 Submission of Questions

- 1. Questions shall reference the applicable:
 - a. Microsoft Excel XLS, Sheet number and name and Requirement Number, or
 - b. The applicable Section Number of this RFP
- 2. Submit questions in accordance with the instructions noted in the section above labeled, "RFP Process".

6.5 Effective Dates of Offer

1. Offer prices and costs in Vendor submittal must remain valid for 90 days from submittal.

6.6 Terms and Deadlines

1. The term of any contracts will be for one year from the date of execution. APPA reserves the right to extend the period of performance of the contract, subject to mutual agreement, to a period no later than *September 24, 2023*.

6.7 Proposal Preparation Costs

- 1. All costs for the preparation and submission of a proposal will be borne by the bidder.
- 2. APPA assumes no responsibility whatsoever for reimbursement for preparation of proposals.
- 3. The RFP response(s) will become part of a contract with the successful bidder.

6.8 Best and Final Offers

To obtain best and final offers from Vendors whose proposals are determined by APPA to be reasonably considered for an award, APPA may, at its sole discretion:

- 1. Enter into discussions;
- 2. Schedule oral presentations; and/or
- 3. Request revised proposals.

6.9 Partial and Multiple Awards

- 1. Unless stated to the contrary in the Statement of Work, APPA and Member Utilities reserve the right to name a partial and/or multiple awards, in the best interest of APPA and Member Utilities.
- 2. Vendors are to prepare proposals given APPA's right to a partial or multiple award.
- 3. If Vendor is submitting an All or None offer, such offer must be clearly marked as All or None.
- 4. Further, APPA and Member Utilities may eliminate an individual line item when calculating award, to best meet the needs of APPA and Member Utilities, if a particular line item is not routinely available or is a cost that exceeds the APPA funds.

6.10 Changes to the RFP/Addenda

- 1. A change may be made by APPA if, in the sole judgment of APPA, the change will not compromise APPA's objectives in this acquisition.
- 2. A change to this RFP will be made by formal written addendum issued by APPA's RFP Coordinator to those bidders who have informed APPA of their Intent to Bid.
- 3. Addenda issued by APPA shall become part of this RFP and may be included as part of any contracts between Member Utilities and Vendor(s).
- 4. It is the responsibility of the interested Vendor to assure that they have received Addenda if any are issued.

6.11 Rejection of Proposals

1. APPA reserves the right, in its sole judgment, to reject any and all responses received as a result of this RFP, or to negotiate with any or all responding Vendors.

6.12 Cancellation of this RFP

- 1. APPA may cancel or withdraw a Request for Proposal in whole or in part at any time prior to award of any contracts.
- 2. APPA, nor any Member Utility, is not bound by the issuance of this RFP to award a contract, or to take any actions suggested in the proposals.

6.13 News Releases

1. News releases pertaining to the selection of the Vendor shall not be made without prior written permission of APPA.

7 Submission Instructions

7.1 APPA Provided Detailed RFP Requirements Files

Detailed RFP Requirements will only be provided to Bidders that have executed an APPA Non-disclosure Agreement and have indicated an Intent to Bid:

- 1. RFP_Technical_and_Vendor_Evaluation.xlsx (TVE).
- 2. NATF Vendor Questionnaire cyber-security-criteria-for-suppliers.xlsx (NATF).
- 3. Representative Architectures:
 - a. Attachment_A.1_Separate_OT-IT_Representative_Architecture.pdf
 - b. Attachment_A.2_One_Way_Data_Flow_Representative_Architecture.pdf
 - c. Attachment_A.3_No_DMZ_Representative_Architecture.pdf
 - d. Attachment_A.4_DMZ_Representative_Architecture.pdf
 - e. Attachment_A.5_DMZ_with_Segmentation_Representative_Architecture.pdf

7.2 Bidder Proposal

- 1. Single Vendor electronic document containing narratives:
 - a. Letter of Transmittal and Management Summary.
 - b. Additional Vendor Provided Information (Linked to an APPA provided Microsoft Excel Spreadsheet).
- 2. Completed Vendor Provided information:
 - a. RFP_Technical_and_Vendor_Evaluation.xlsx (TVE).
 - b. NATF Vendor Questionnaire cyber-security-criteria-for-suppliers.xlsx (NATF).
- 3. Marked-up Representative Architectures:
 - a. Attachment_A.1_Separate_OT-IT_Representative_Architecture.pdf
 - b. Attachment_A.2_One_Way_Data_Flow_Representative_Architecture.pdf
 - c. Attachment_A.3_No_DMZ_Representative_Architecture.pdf
 - d. Attachment_A.4_DMZ_Representative_Architecture.pdf
 - e. Attachment_A.5_DMZ_with_Segmentation_Representative_Architecture.pdf

4. All applicable Vendor standard contracts and agreements in electronic format.

7.3 Format Requirements

- 1. All Bidder shall submit only the 2 Microsoft Excel Spreadsheets (xlsx) provided by APPA, only 1 supplemental Vendor provided electronic document, as needed and marked-up Representative Architectures.
- 2. Submissions shall include filled-in information in the APPA provided spreadsheets with the option of the bidder embedding links in the spreadsheet "Links to Additional Vendor Provided Information" columns to an accompanying narrative in a single Vendor provided electronic document.
 - a. The is no length limitation to the Vendor provided electronic document.
 - b. Links shall only be between the 2 APPA provided Microsoft Excel Spreadsheets and the Vendor provided electronic document containing narratives.
 - c. There shall be no external links.
- 3. Bidder may submit markups of the Representative Architectures in separate files for each of the Representative Architectures.

7.4 Letter of Transmittal and Management Summary

1. A letter of transmittal containing the following shall be included in the Vendor provided electronic document.

7.4.1 Introduction

- 1. Vendor company
 - a. Name
 - b. Address
 - c. Federal EIN or SSN
 - d. Tax ID / DUNS
- 2. Vendor responsible person to be contacted:
 - a. Name
 - b. Title
 - c. Telephone number
 - d. E-mail address and
 - e. Signature
- 3. Any other persons who are authorized to represent the company in dealing with this RFP.

7.4.2 Management Summary

The management summary portion should:

- 1. Reflect the Vendor's understanding of the services desired and its ability to meet the requirements of this RFP,
- 2. Describe the Vendor's approach to the proposal and
- 3. Clearly indicate any options or alternatives.

7.4.3 Technology Submittal

- 1. Confirm TVE xlsx <u>Sheet 2A Specification Requirements</u> information completed.
- 2. Confirm TVE xlsx <u>Sheet 3 Representative Architectures</u> information completed.
 - a. Vendor shall articulate relevant design considerations for each Representative Architecture.
 - b. Vendor shall articulate relevant deployment strategies for each Representative Architecture.
 - c. Vendor shall depict Technology placement upon Representative Architectures.

7.4.4 Vendor Qualifications Submittal

1. Confirm TVE xlsx <u>Sheet 4 Vendor Qualifications</u> information completed.

7.4.5 Prior Experience Submittal

1. Confirm applicable TVE xlsx <u>Sheet 4 Vendor Qualifications</u> information completed.

7.4.6 References Submittal

- 1. Confirm TVE applicable xlsx <u>Sheet 4 Vendor Qualifications</u> information completed.
 - a. To validate prior experience, Vendor shall provide each name, company name, contact information, project scope, description of services, relationship length and name and contact information for each principal contact.

7.4.7 Ability to Execute Submittal

- 1. Confirm applicable TVE xlsx <u>Sheet 5 Supply Chain</u> information completed.
- 2. Confirm applicable TVE xlsx <u>Sheet 6 Vendor Capacity</u> information completed.
- 3. Confirm applicable TVE xlsx <u>Sheet 7 Vendor Execution</u> information completed.
 - a. To facilitate the development of Deployment Execution Strategies and Methods, Vendor shall identify what technologies, services and agreements are being offered and the contributions from Vendor itself, and its partners in the applicable columns.

7.4.8 Personnel Submittal

- 1. Confirm TVE xlsx applicable <u>Sheet 6 Vendor Capacity</u> information completed.
 - a. To ensure that proposed staffing is adequate, Vendor shall Specify the estimated number of professional personnel, consultants, and technicians who will be engaged in the work, describing experience level, of each individual, and the responsibilities each will have in this project/service.

7.4.9 Contracts, Agreements, Pricing and Payments Submittal

- 1. Confirm TVE xlsx applicable <u>Sheet 8 Terms and Conditions</u> information completed.
 - To facilitate evaluation and creating standardized lightweight contracts, Vendor shall parse their standard contracts and agreements terms and conditions by the applicable <u>Sheet 8 Terms and Conditions</u> requirements and

use the columns <u>Vendor Provided Information</u> and <u>Link to Additional Vendor</u> <u>Provided Information</u> to provide this information.

- 2. Confirm all applicable contracts and agreements terms and conditions provided in an electronic format.
- 3. Confirm TVE xlsx applicable <u>Sheet 9 Pricing</u> information completed.
- 4. Confirm TVE xlsx applicable <u>Sheet 10 Payments</u> information completed.
- 7.4.10 Major requirements that cannot be met by the Vendor
 - 1. Confirm TVE xlsx <u>Sheet 7 Vendor Execution</u> information completed.

7.4.11 Additional Information

1. The Vendor should include any additional information pertinent to their capabilities and experience in their proposal.

8 Evaluation and Selection Process

- 1. The proposal evaluation process involves the review of proposals received in response to the RFP to ensure that each proposal meets requirements.
- 2. Proposals will be reviewed and evaluated by APPA and Member Utilities.
- 3. Proposals will be evaluated based on the criteria outlined in the RFP.
- 4. APPA will recommend for selection of the proposal(s) which most closely meets the requirements of the RFP and satisfies APPA's and Utility needs.
- 5. Proposals which have been determined to have not met the requirements are excluded from any further consideration.
- 6. Negotiations will be undertaken with the Vendor(s) whose proposal(s) shows that they are qualified, responsible, and capable of performing the work.
- 7. APPA reserves the right to request additional information which, in the APPA's opinion, is necessary to assure that the Vendor's competence, number of qualified employees, business organization, and financial resources are adequate to perform according to the contract.
- 8. APPA may make such investigations as deemed necessary to determine the ability of the Vendor to perform the work, and the Vendor shall furnish to APPA all such information and data for this purpose as requested by APPA.
- 9. APPA reserves the right to reject any proposal if the evidence submitted by, or investigation of, such Vendor fails to satisfy APPA that such Vendor is properly qualified to carry out the obligations of the agreement and to complete the work specified.

9 Evaluation Criteria

9.1 Evaluate Technologies

9.1.1 Evaluate Technology Vs. Specification Requirements
The technology evaluation is based upon OT Cybersecurity Systems Specification
(TVE xlsx <u>Sheet 2A Specification Requirements</u>)

- 1. High-Level Requirements.
- 2. Functional Requirements.
- 3. User Interface Requirements.
- 4. Integration Requirements.
- 5. System Security Requirements.
- 6. Environmental Requirements.
- 7. Testing/Validation Requirements.
- 9.1.2 Evaluate Technology with respect to Six Advanced Technologies

The six advanced technologies evaluation (TVE xlsx <u>Sheet 2A Specification</u> <u>Requirements</u>) is based upon what is presently commercially available and the future roadmap provide by Vendor

- 1. Detect and respond to adversarial cyber activity on OT networks in the energy sector through a collective defense approach.
- 2. Utilize artificial intelligence to identify anomalies, reduce false positives, and update OT assets.
- 3. Provide for advanced analytics to enable the user to identify the systems when and where compromised.
- 4. Increase system resilience in energy delivery control systems or components.
- 5. Employ autonomous defense solutions at remote endpoints to protect against inband and out-of-band attacks. This includes hardware, firmware, or software that protects, defends, or hardens deployed OT.
- 6. Deliver anonymized aggregated data to a separate platform for analysis.

9.1.3 Evaluate Technology with respect to Representative Architectures

The Architecture evaluation is based upon how each technology is deployed within each representative architecture (TVE xlsx <u>Sheet 3 Representative Architectures</u>).

- 1. Separate OT-IT Representative Architecture.
- 2. One Way Data Flow Representative Architecture.
- 3. No DMZ Representative Architecture.
- 4. DMZ Representative Architecture.
- 5. DMZ with Segmentation Representative Architecture.

9.2 Evaluate Vendor Qualifications

- 9.2.1 Evaluate Companies Vs. Due Diligence Checklist (TVE xlsx <u>Sheet 4 Vendor Qualifications</u>).
- 9.2.2 Evaluate Vendor Supply Chain (TVE xlsx <u>Sheet 5 Supply Chain</u>).
- 9.2.3 Evaluate NATF Vendor Questionnaire (See NATF xlsx).

- 9.3 Evaluate Vendor Ability to Execute
- 9.3.1 Evaluate Vendor Capacity (TVE xlsx <u>Sheet 6 Vendor Capacity</u>).
- 9.3.2 Evaluate Vendor Work Plan (TVE xlsx <u>Sheet 6 Vendor Capacity</u>).
- 9.3.3 Evaluate Vendor Execution Model (TVE xlsx <u>Sheet 7 Vendor Execution</u>).
- 9.4 Evaluate Vendor Contractual Terms and Conditions (TVE xlsx Sheet 8 Terms and Conditions)
 - 1. Standardized lightweight contracts
- 9.5 Evaluate Pricing/Pricing Models (TVE xlsx <u>Sheet 9 Pricing</u>)
- 9.6 Evaluate Payment Methods (TVE xlsx <u>Sheet 10 Payments</u>)
 - 1. Standardization
 - 2. Ease of use
 - 3. Adaptability to APPA method

10 Selection Criteria.

- 1. Proposals will be evaluated by APPA using the following criteria, the order of which is not indicative of their weight or importance.
- 2. Below are the generic criteria; more can be specified, depending on the critical aspects of the requirements.

10.1 Understanding APPA's Requirements

1. This refers to the Vendor's understanding of APPA's needs that generated the RFP, of the APPA's objectives in asking for the scope of work, and of the nature and scope of the work involved.

10.2 Meeting APPA's OT Technology Requirements

1. This refers to the ability of the Vendor's technology to satisfy the technical and operational requirements for each of the Representative Architectures.

10.3 Vendor Qualifications and Experience

- This refers to the ability of the Vendor to meet the terms of the RFP, and the quality, and relevancy of similar services provided and completed by the Vendor, including the Vendor's financial ability to undertake a project of this size.
 - A. Company Profile

- B. SAM.gov
- C. Prior Experience
- D. Project Management
- E. Data Management
- F. Cost Management

10.4 Vendor References

- 1. Relevant previous experience of providing systems and services rendered within the last two years.
- 2. Three (3) references of customers for whom you have provided services similar to those described in this RFP.

10.5 Vendor Ability to Execute

- 1. Vendor's ability to execute depends upon many temporal factors both in the shortterm period for pilot deployments and for scaling to a larger number of Public Power Utilities.
- 2. Vendor's ability to execute depends the ease of use and simplicity of any Deployment Execution Strategies and Methods offered.
- 3. Vendor's flexibility with respect contracts.
- 4. Vendor's capability to create Lightweight deployment packages matched to Representative Architectures.

10.6 Vendor Contractual Terms, Conditions and Payment Methods

- 1. Vendor's ability to agree to Lightweight contracts to be used to facilitate speedy deployments of OT Cybersecurity Technologies to Public Power Utilities.
- 2. Vendor's capability to provide simple invoice and payment options to eb used to facilitate speedy deployments of OT Cybersecurity Technologies to Public Power Utilities.

10.7 Vendor Fee Structure or Costs

- 1. Fee structure and/or costs for the appropriate services will also be considered in the evaluation but is not the sole determining factor.
- 2. Streamlined, standardized and easy-to-use Fee structure will facilitate speedy deployments of OT Cybersecurity Technologies to Public Power Utilities.

11 Contract Execution

11.1 APPA and Utilities Develop Contracts for Specific Deployments

- 11.1.1 APPA issues Award Packages to Member Utilities for contract execution
 - 1. Selected Technologies
 - 2. Selected Vendors
 - 3. Standardized Lightweight Contracts
 - 4. Standardized Pricing Models

- 5. Standardized Payment Models
- 6. Deployment Execution Strategies and Methods
- 11.1.2 Utility Applies Utility-Specific Considerations
 - 1. Site-specific parameters
 - a. Applicable Representative Architecture
 - b. Network Topology
 - c. Network Architecture
 - d. Performance
 - e. Environmental
 - f. Sizing
 - g. Maturity
 - h. Capability
 - i. Ability to execute
 - 2. Site-specific pricing
 - 3. Utility specific contract terms and conditions
- 11.1.3 Utility Selects OEM, implementer, integrator, partner relationships
 - 1. Deployment Execution Strategies and Methods
- 11.2 Utility Executes Contracts
- 11.2.1 OT Cybersecurity Technology
- 11.2.2 Deployment/Implementation/Integration Services
- 11.2.3 On-going Support Agreements and Subscriptions

12 APPA Confidentiality and Nondisclosure Agreement

This Agreement is made and entered into as of this [__] day of [month] [year], by and between the American Public Power Association (APPA) and [Company]

Confidentiality: Except as otherwise set forth herein, you agree that any APPA software, services, and/or hardware (including related documentation and materials) provided to you under this Agreement, and any information disclosed by APPA to you in connection with this Agreement will be considered and referred to as "APPA Confidential Information."

Notwithstanding the foregoing, APPA Confidential Information will not include: (a) information that is generally and legitimately available to the public through no fault or breach of yours; (b) information that is generally made available to the public by APPA; (c) information that is independently developed by you without the use of any APPA Confidential Information; (d) information that was rightfully obtained from a third party who had the right to transfer or disclose it to you without limitation; or (e) any third party software and/or documentation provided to you by APPA and accompanied by licensing terms that do not impose confidentiality obligations on the use or disclosure of such software and/or documentation.

Sharing APPA Confidential Information: APPA wishes to share APPA Confidential Information under Cooperative Agreement Award Number: DE-CR0000007 (hereafter "CA") including all related materials with the Participant for the purpose of developing a public power OT Cyber Defense Development and Deployment Specification, to complete the APPA Project Management Plan, and to review and assist with other work products specific to CA tasks for submission to the Department of Energy.

Nondisclosure and Nonuse of APPA Confidential Information: Unless otherwise expressly agreed or permitted in writing by APPA, you agree not to disclose, publish, or disseminate any APPA Confidential Information to anyone other than to employees and contractors working for the same entity as you and then only to the extent that APPA does not otherwise prohibit such disclosure. You further agree to take reasonable precautions to prevent any unauthorized use, disclosure, publication, or dissemination of APPA Confidential Information. You acknowledge that unauthorized disclosure or use of APPA Confidential Information could cause irreparable harm and significant injury to APPA that may be difficult to ascertain. Accordingly, you agree that APPA will have the right to seek immediate injunctive relief to enforce your obligations under this Agreement in addition to any other rights and remedies it may have. If you are required by law, regulation or pursuant to the valid binding order of a court of competent jurisdiction to disclose APPA Confidential Information, you may make such disclosure notwithstanding anything else in this agreement, but only if you have notified APPA before

making such disclosure and have used commercially reasonable efforts, to the extent permissible by governing law applicable to Participant to limit the disclosure and to seek confidential, protective treatment of such information. A disclosure pursuant to the previous sentence will not relieve you of your obligations to hold such information as APPA Confidential Information.

Removal of Participants: APPA, at its discretion, will remove any Participant from the CA program if the Participant willfully violates this Agreement.

Return or Destruction of Confidential Information

Promptly upon written request of APPA, the Receiving Party shall, and shall cause its Representatives to return to the Disclosing Party or destroy all Confidential Information in tangible form (whether in written form, electronically stored or otherwise), and neither the Receiving Party nor any of its Representatives shall retain any copies or extracts thereof.

Information Security:

Without limiting Contractor's obligation of confidentiality as further described in the Agreement and herein, Contractor will be responsible for establishing and maintaining an information security program that is designed to: (i) ensure the security and confidentiality of APPA Data; (ii) protect against any anticipated threats or hazards to the security or integrity of the APPA Data; (iii) protect against unauthorized access to or use of the APPA Data; (iv) ensure the proper disposal of APAA Data; and (v) ensure that all subcontractors of Contractor, if any, comply with all of the foregoing.

Contractor will designate an individual to be responsible for the information security program. Such individual will respond to APPA inquiries regarding computer security and to be responsible for notifying APPA-designated contact(s) if a breach occurs.

Upon becoming aware of a breach affecting APPA Data, Contractor will immediately commence all reasonable efforts to investigate and correct the causes and remediate the results thereof. **Contractor** shall without undue delay (and in no event later than 72 hours of becoming aware of such breach) inform APPA and provide written details of the breach, including the type of data and systems affected, the likely consequences of the breach, any other relevant information for APPA to understand the nature of the breach, and the measures taken or proposed to be taken to address it, as soon as such information becomes known or available to Contractor.

Contractor agrees that any and all transmission or exchange of system application data with APPA and other parties shall take place via secure means, e.g. HTTPS, FTPS, SFTP or equivalent means.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

АРРА	[Vendor]
Ву:	Ву:
Date:	Date:

13 Contract Pass-through Requirements for CA for DE-CR0000007

Certain provisions will be passed down through all contracts resulting from efforts related to the Cooperative Agreement.

13.1 APPA Confidentiality and Nondisclosure Agreement (from Section 12)

13.2 APPA Code of Conduct and Organizational Conflict of Interest

- 1. Introduction. The American Public Power Association ("APPA") has a strong commitment to promoting honest and ethical business conduct by all of its staff, members and contractors ("Participants") and in complying with the laws that govern the conduct of our business. To implement our commitment, we have developed this Code of Conduct (the "Code"), which is designed to deter wrongdoing and to promote honest and ethical conduct, including the avoidance and ethical handling of actual or apparent conflicts of interests in relation to the DE-CR0000007 Develop & Deploy Cybersecurity Defense for Public Power Cooperative Agreement ("CA"). Including sharing of sensitive information and related materials with the Participant for the purpose of developing a public power OT Cyber Defense Development and Deployment Specification, to complete the APPA Project Management Plan, and to review and assist with other work products specific to CA tasks for submission to the Department of Energy (hereafter "Work Products"); The Association reserves the right to change the provisions of this Code at any time.
- 2. Honest and Fair Dealing. Participants must endeavor to deal honestly, ethically and fairly with each other and third parties. In the course of carrying out his or her duties in relation to the CA, no participant should take unfair advantage of anyone through manipulation, concealment, abuse of privileged information, misrepresentation of material facts, or other unfair practices.
- 3. Conflict of Interest. The primary purpose of this clause is to aid in ensuring that the Participant Is not placed in a conflicting role because of current or planned interests (financial, contractual, organizational, or otherwise) which relate to the work under this contract. The restrictions described apply to performance or participation by Participants in the activities covered by this clause, as defined by:
 - a) <u>Affiliates</u> means business concerns which are affiliates of each other when either directly or indirectly one concern or individual controls or has the power to control another, or when a third-party controls or has the power to control both.
 - b) <u>Contract</u> means any contractual agreement or other arrangement with APPA.
 - c) <u>Evaluation activities</u> means any effort involving the appraisal of a technology, process, product, or policy.

- d) <u>Offeror or prospective contractor</u> means any person, firm, unincorporated association, joint venture, co-sponsor, partnership, corporation, or their affiliates or successors in interest, including their chief executives, directors, key personnel, proposed consultants, or subcontractors, submitting a bid or proposal, solicited or unsolicited, to the APPA to obtain a contract.
- e) <u>Organizational conflicts of interest</u> means that a relationship exists whereby a Participant or prospective Participant has present or planned interests related to the work to be performed under an APPA contract which may diminish its capacity to give impartial, technically sound, objective assistance and advice, or may otherwise result in a biased work product; or may result in its being given an unfair competitive advantage.
- f) <u>Participant</u> means any person, firm, unincorporated association, joint venture, cosponsor, partnership, corporation, affiliates thereof, or their successors in interest, including their chief executives, directors, key personnel (identified in the contract), proposed contractors, consultants or subcontractors, which are a party to a contract with the APPA.
- g) <u>Potential conflict of interest</u> means that a factual situation exists that suggests that an actual conflict of interest may arise from award of a proposed contract. The term potential conflict of interest is used to signify those situations that
 - I. Merit investigation before contract award to ascertain whether award would give rise to an actual conflict; or
 - II. Must be reported to the APPA Principal Investigator for investigation if they arise during contract performance.

Participants must avoid any interest that conflicts or appears to conflict with the interests of the terms of the Cooperative Agreement or that could reasonably be determined to harm APPA reputation or conflict with the development of the Work Products. A conflict of interest exists if actions by a Participant are, or could reasonably appear to be, influenced directly or indirectly by personal interests, affiliations or actual or potential benefit or gain to the individual or his or her immediate family.

Any individual who may be involved in development of a Work Product or evaluation of a bid in response to Requests for Proposals (RFPs) in which he or she has an actual or apparent conflict of interest, shall not participate in or be present at that portion of the meeting at which the Work Product, RFP or transaction is considered. The interested individual may, however, answer questions regarding the Work Product, RFP or transaction.

Notwithstanding any other provision of this contract, during the term of this contract, **Participants** agrees to notify APPA of consulting or other contractual arrangements with

any firm or organization the result of which may give rise to a conflict of interest with respect to the work being performed under this contract. **Participants** shall ensure that all employees under this contract abide by the provision of this clause. If the **Participant** has reason to believe, with respect to itself or any employee, that any proposed consultant or other contractual arrangement with any firm or organization may involve a potential conflict of interest, the **Participant** shall obtain an affirmation from APPA that the current contract can continue without modification or result in immediate termination of the contract.

The Participant warrant that to the best of its knowledge and belief, and except as otherwise set forth in this contract, that it does not have any organizational conflicts of interest as defined above. The Participant agrees that if, after award, it discovers organizational conflicts of interest with respect to this contract, it shall make an immediate and full disclosure in writing to the APPA Principal Investigator. This statement must include a description of the action which the Participant has taken or proposes to take to avoid or mitigate such conflicts.

Any Participant who has a question as to whether a particular set of facts or situation gives rise to a potential conflict of interest must seek clarification from the Association's General Counsel.

- 4. Confidentiality. Participants may have access to proprietary and confidential information concerning the CA's tasks, participants, and contracted vendors. They are required to keep such information confidential during their service as well as thereafter, and not to use, disclose, or communicate that confidential information other than as required in the course of the CA's business.
- 5. **Meeting Behavior**. APPA expects all meeting participants to display the highest level of personal and professional integrity.

Expected behavior at all times:

- a. Be considerate and respectful of others
- b. Be fair and honest and act in good faith
- c. Be aware of how language and images may be perceived by others, even if not so intended
- d. Follow the rules of the venue of the meeting
- e. Abide by all state and federal laws which prohibit the exchange of information among competitors regarding price, refusals to deal, markets division, tying relationships and other topics which might infringe upon antitrust laws and regulations

Unacceptable Behavior

The Association will not tolerate any harassment, intimidation, exclusionary behavior, illegal discrimination or actions by meeting attendees which lead to a

less-than-welcoming community environment. The list below is not meant to be an exhaustive list, but is representative of unacceptable behaviors:

- f. Verbal or physical abuse or harassment
- g. Threats of violence
- h. Inappropriate verbal or written comments about a person's gender, sexual orientation, disability, race, religion, national origin or any other characteristic protected by law
- i. Suggestive, derogatory or inappropriate nicknames or terms
- j. Unwelcome sexual attention
- k. Personal attacks or other disparagement of the views of others
- I. Verbal disruptions
- 6. Violations of the Code of Conduct for Association Meetings. Those subjected to, or witnessing, possible violations of this code of conduct should report all such potential violations to an APPA staff member or to APPA's General Counsel (dpatterson@publicpower.org) Acknowledgement and Signature for Participation. Participants must affirm that they have read and understand the Code and must sign below to start active participation in the program and annually thereafter.

[Vendor].			

Ву: _____

Date: _____

13.3 DOE Data Sharing Agreement

The aggregate, anonymized data made available as a result of this project may be shared by members and organizations with the permission of APPA. Sharing of this data must include proper citation, containing the following:

Acknowledgment: "This material is based upon work supported by the Department of Energy under Award Number(s) DE-CR0000007."

Disclaimer: "This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."