Part I: Overview	
Project Title	PROJECT TEMPO-TESTING AND EVALUATION OF MEDIUM-VOLTAGE POWER OPTIONS
Project Number	ERDCWERX26_OT01
Announcement Type	Request for White Paper (RFWP)
Release Date	11 May 2026
Closing Date/Time	22 May 2026
Individual Awards	Multiple awards may be issued
Agreement Type	Firm Fixed Price Milestones
Anticipated Value	Total Estimated Project Value - $6M • Multiple $1-2M awards are anticipated
Period of Performance	**Total Period of Performance – 18 months**
Questions and Submissions	**Whitepaper submissions must be made to the ERDCWERX website** All questions must be directed to the following POCs and URL: • **Kelly Andrews, Kelly.Andrews@usace.army.mil** • **https://share.hsforms.com/1O8-vyeiATO6alDcxk4tTog4120r**

Introduction

It is important to note that this notice in a Request for White Paper (RFWP) is not a Request for Prototype Proposal (RFPP). This notice shall not be construed as a commitment by the Government to issue a RFPP or ultimately award a project, nor does it restrict the Government to a particular acquisition approach. No entitlement or payment of direct or indirect costs or charges by the Government shall arise because of offeror submission of responses or the Government's use of such information.

This RFWP is a two-step project announcement.

Step 1: This notice is being issued to solicit **white papers ONLY**. The purpose of white paper submissions is to identify potential partners that may have promising solutions relative to the project objectives herein. An offeror that describes a promising prototype solution may be asked to virtually attend a solution pitch to provide additional information to the Government project team. However, the Government reserves the right to move straight to RFPP based on whitepaper submission only.

Step 2: The Government may issue an RFPP to the offeror(s) with the most promising solution(s) relative to the project objectives described herein. The Government may provide feedback to each vendor on their proposed solution. The Government reserves the right to make changes to the final project announcement before issuing RFPP(s). Upon receipt, the Government will evaluate the proposal(s) through a scientific review process in accordance with the evaluation criteria to determine which proposal(s) represent the best value to the Government and should be awarded.

Part II: ANNOUNCEMENT

A. PROBLEM STATEMENT

The Army's Prime Power medium voltage grid, which relies on legacy assets like the MEP-810D power plant, faces critical capability gaps in supporting modern, power-intensive field operations. This generator-centric model lacks resilience, meaning a sudden failure or routine maintenance shutdown of an MEP-810D can cause a complete power interruption across the tactical grid it supports, jeopardizing critical command and control functions. Moreover, the MEP-810D is often forced to run continuously and inefficiently, even under light loads, leading to excessive fuel consumption and increased engine wear, which amplifies the logistical burden required to sustain medium voltage power at the tactical edge.

B. BACKGROUND

The Army's Prime Power capability, primarily executed by the highly specialized 249th Engineer Battalion, was established to meet the ever-increasing electrical demands of a modern, technology-driven military. These soldiers undergo extensive training to deploy and manage medium-voltage electrical grids in tactical environments worldwide. A core legacy asset in this mission is the MEP-810D, a large diesel generator that reflects a traditional, generator-centric power strategy.

These generators are often forced to run continuously and inefficiently, even during periods of low demand, simply to maintain grid presence. This practice not only leads to excessive fuel consumption and amplifies the logistical burden of sustaining power at the tactical edge but also results in significant engine wear.

Integrating a Battery Energy Storage System (BESS) with legacy assets like the MEP-810D power plant represents a significant leap forward in modernizing the Army's Prime Power capabilities. This hybrid approach unlocks substantial benefits in resilience, fuel efficiency, and maintenance.

By pairing the MEP-810D with a BESS, the tactical grid gains a powerful layer of resilience. The BESS acts as an instantaneous, uninterrupted power supply (UPS), seamlessly bridging any power gaps caused by generator maintenance, refueling, or unexpected shutdowns. This ensures that critical command and control systems receive continuous, uninterrupted power, safeguarding them from data loss or failure and enhancing overall mission continuity.

The most significant advantage is in fuel efficiency. The BESS enables intelligent "load-leveling," allowing the MEP-810D to operate at its peak efficiency to power loads and charge the battery. During periods of low demand, the MEP-810D can be shut down completely, with the BESS silently providing the necessary power. This operational strategy drastically reduces the generator's total runtime, leading to dramatic fuel savings and a corresponding reduction in the logistical footprint required to transport fuel to the field.

This reduction in runtime directly translates to significant maintenance benefits. By minimizing the operational hours of the MEP-810D, the BESS lessens engine wear and tear, lowers the frequency of required maintenance, and ultimately extends the operational lifespan of the Army's valuable legacy power assets.

C. OBJECTIVES/TECHNICAL REQUIREMENTS

The primary objective is to assess the current Commercial-Off-the-Shelf (COTS) system capabilities and then modify the COTS to a Battery Energy Storage System (BESS) capable of seamless interoperability with the Army's 4160V prime power architecture. A critical technical requirement is that this system must autonomously integrate with legacy assets like the MEP-810D power plant without needing constant soldier intervention. The desired capability is a resilient system that functions as an uninterruptible power supply (UPS) and an "electrical shock absorber" to ensure grid stability for sensitive equipment. This process will improve efficiency by enabling "load-leveling," allowing generators to run at peak performance or shut down during low demand, which in turn will drastically reduce fuel consumption and lower maintenance costs by minimizing engine runtime. The goal is the delivery and operational validation of a modernized, ruggedized BESS prototype that has been proven ready for future procurement and mission use.

To fulfill the Battery Energy Storage System (BESS) requirement, the U.S. government anticipates issuing multiple individual agreements, each valued between $1 and $2 million.

Desired attributes of the prototype are as follows:

Connection

- The Battery Energy Storage System (BESS) must be designed for direct physical and electrical integration into a dedicated circuit "way" within the 4160V Primary Switching Center (PSC) NSN: 6110-01-493-3391. This connection shall be made via a medium-voltage, three-phase circuit breaker appropriately rated for the application. Critically, this breaker must be equipped with advanced protective relays specifically programmed to handle bi-directional power flow, as the BESS will both draw power from and supply power to the PSC bus. These relays must provide comprehensive protection against faults including over and under voltage, over and under frequency, overcurrent, and reverse power.

- The BESS must feature fully automated synchronization capability. This system will continuously monitor the PSC bus voltage, frequency, and phase angle, ensuring its own inverter output is a perfect match before permitting the circuit breaker to close. This prevents catastrophic damage that would result from connecting unsynchronized sources.

- The BESS must provide a standard communication interface, such as Modbus TCP/IP or CAN bus, to allow a master Microgrid Controller to manage its operation and initiate the synchronization sequence. For personnel safety, the BESS enclosure and all electrical components must be securely bonded to the PSC's common grounding system.

- The main isolating device for the BESS must be designed to accommodate a physical lock and tag under Lockout/Tagout (LOTO) procedures, ensuring the system can be safely de-energized and isolated for maintenance.

- The BESS must be capable of sustained and effective operation in harsh desert climates, similar to those found in the U.S. Central Command (CENTCOM) Area of

Responsibility (AOR). The system must be able to withstand and function optimally in a wide range of ambient temperatures, from below freezing to 130°F (54°C).

- The system's design must account for the challenges of a degraded visual environment (DVE) caused by sand and dust storms, ensuring continued operation and safety. The BESS must be resilient to airborne particulates, including sand and dust, which are common in this region and can negatively impact equipment performance and longevity.

- The BESS will be subjected to rigorous testing under extreme heat conditions, with temperatures averaging over 100°F, to validate its suitability, reliability, and maintainability in these demanding environments.

Battery Energy Storage System

- The proposed Battery Energy Storage System (BESS) must be an advanced, commercially developed solution designed to create a more resilient, efficient, and stable tactical power grid.

- The system should address at least one of the three primary use cases:

    - Provide a continuous, uninterruptible power supply.
    - Stabilize power quality and grid frequency by absorbing electrical fluctuations.
    - Boost fuel efficiency by using smart generator controls, running them at peak performance or shutting them down when demand is low

- The core of the system must be a high-performance battery, specified as Lithium Iron Phosphate (LFP) or better, with a long operational life of over 6,000 cycles at an 80% depth of discharge and a high round-trip efficiency exceeding 92%.

- The system must be configurable for 4160V AC, 3-Phase, 60 Hz operation to integrate with the Army's Prime Power Distribution network

- For the 480V BESS, proposals must include a comprehensive plan for **stepping up and down** the voltage to integrate with the 5kV-class PSC switchgear.

- The system must have a usable energy capacity of at least 1MW.

- The power conversion System is required to have a continuous power rating of at least 1MW

- The power conversion must demonstrate an overload capability of 125% for ten minutes (1.2 MW).

- A minimum Energy storage of 2MWh

- A Battery Management System (BMS) for cell-level monitoring of voltage, current, and temperature. It must also provide automatic protection against over-charge, over-discharge, and thermal runaway.

- The entire system must be housed in a rugged, outdoor-rated NEMA 3RX enclosure (or better) with an integrated thermal management system.

- A power conversion system that is Grid forming or Grid following operation mode, both are preferable

- A power conversion system that has four quadrant power factor control operations

- The integrated system must be certified to UL 9540, with the batteries certified to UL 1973 and the PCS certified to UL 1741.

Offerors must be capable of design/ management/ and assembly of all aspects of the prototype.

D. ESTIMATED PROTOTYPE PERIOD OF PERFORMANCE

The estimated period of performance for this prototype is 12 to 18 months. The final duration within this range is contingent upon the level of modernization required to adapt the selected Commercial-Off-the-Shelf (COTS) system to meet our specific operational requirements.

Given that this represents a rapidly needed capability for field operations, the development timeframe is critical. The established schedule will be strictly adhered to, and all milestones will be closely monitored to ensure timely delivery and deployment.

E. DATA RIGHTS

To be determined.

G. ESTIMATED TRAVEL and PURPOSE

To be determined.

H. PROTOTYPE DELIVERABLES

Deliverables will be further defined after RFPP issuance dependent upon the offerors proposed solution.

Part III. AWARD INFORMATION:

1. FUNDING: The selected industry partners will be fully funded to execute the modernization in FY26.

2. FOLLOW ON ACTIVITES/ PRODUCTION: The USACE, ERDC is using competitive procedures to select participants in a prototype transaction under 10 USC 4022. If the prototype is determined successful, agencies may exercise authority under 10 USC 4022(f) to provide for, and award, a follow- on production transaction or FAR based contract without additional competitive procedures.

Part IV. ELIGIBILITY INFORMATION:

To qualify for award, an offeror must satisfy at least one of the following:

1) The prototype project includes significant participation by at least one nonprofit research institution or nontraditional defense contractor (NDC),
2) All significant participants in the transaction other than the Federal Government are small business concerns, or
3) At least one-third of the total cost of the prototype project is to be paid out of funds provided by parties other than the Federal Government

An NDC is defined as an entity that is not currently performing and has not performed, for at least the one-year period preceding the solicitation of sources by DoD for the procurement or transaction, any contract or subcontract for the DoD that is subject to full coverage under the cost accounting standards prescribed pursuant to section 1502 of title 41 and the regulations implementing such section (see 10 U.S.C. 2302(9)).

Additionally, prior to award, an offeror must be registered at www.sam.gov. Please note, project timelines may not allow for registration after whitepaper selection, therefore, offerors are highly encouraged to register as soon as possible.

Part VI. WHITE PAPER REQUIREMENTS AND REVIEW

DO NOT INCLUDE PROPRIETARY INFORMATION

White papers shall be submitted through ERDCWERX no later than 22 May 2026, 1700 CST.

1. **GENERAL FORMATTING REQUIREMENTS:** White papers shall be submitted electronically. All submissions must be clear, legible, and conform to the following general formatting guidelines:
    - Paper: Pages shall be 8.5 x 11 inches, single sided, with each page numbered “X of Y pages.”
    - Margins: Minimum of 1 inch on all sides.
    - Type Font: 12 point Times New Roman, single spaced.
    - Acronyms: Spell out all acronyms the first time they are used. One page of the proposal body is allocated to spell out acronyms, abbreviations and symbols. This does not count towards white paper page limits.
    - Language: English.
    - Electronic file format: PDF, compatible with current Adobe Acrobat Reader. File size less than 20 MB.
2. **CONTENT:** White papers consist of a detailed solution brief that is up to three pages and a pitch deck up to five pages. The complete white paper shall be no longer than eight pages. The solution brief and pitch deck will be reviewed holistically. It is recommended (but not required) that more detailed information be included in the solution brief and higher-level information be included in the pitch deck.
    a. **Technical Requirements.**
        - Background and benefits of proposed solution

- General technical approach to stated objectives
- Potential Delivery schedule
- Anticipated Data Rights Assertions, if applicable.

b. Rough Order of Magnitude: Estimated price for prototype project.

3. **ENTITY QUALIFICATIONS:** Each offeror must complete Attachment 1 – Entity Qualifications. This does not count towards white paper page limits.

4. **REVIEWS:** White papers will be reviewed based on an integrated assessment of the following:

- The degree to which the solution meets the requirements of the desired objectives.
- The degree to which the potential delivery schedule meets the governments stated period of performance.
- The review of potential impacts of the data rights assertions.
- The review of whether the white paper sufficiently demonstrates 1) significant participation by NDCs or significant participation by non-profit research institutions, 2) all significant participants in the transaction other than the Federal Government are small businesses, or 3) at least one-third of the total cost of the prototype project is to be paid out of funds provided by parties other than the Federal Government.

5. **REQUEST FOR PROTOTYPE PROPOSAL:** The government reserves the right to request a prototype proposal based upon white paper submission only or, if further information is necessary, request a solution pitch. Offerors will not be scored or ranked. The solution pitch is an extension of the white paper submission, therefore will be evaluated within the same criteria listed above. Offerors determined to be the most advantageous to the government may receive an RFPP.

Part VII. PROTOTYPE PROPOSAL REQUIREMENTS AND EVALUATION

Once a solution is selected by the government, an RFPP will be issued to the offeror(s), including submission requirements. Once the RFPP is issued, the offeror and the Government will collaborate to develop the scope of work to be submitted as part of the offeror's proposal.

1. **CONTENT**

a. Cover Page

- Prototype Project Title
- Name of Primary Business submitting proposal. Including Commercial and Government Entity code (CAGE) and Unique Entity Identifier (UEI).
- Date proposal was submitted

b. Statement of Work Requirements: The Offeror shall submit a statement of work that formally captures and defines the work activities, deliverables, and timeline, for the prime contractor and any subcontractors, necessary to execute development of the prototype.

Include the following:

- Detailed Technical Requirements
- Define successful completion
- Reporting and Delivery Requirements
- Period and Place of Performance
- Government Furnished Property/Equipment/Materials/Data
- Access to any Government Sites or Systems, if necessary

c. Milestone Payment Schedule: The Milestone Payment Schedule shall include the firm fixed price payable events for the design effort. Each event shall include a description, target timeframe for completion, and proposed price.

d. Pricing: The Offeror shall provide sufficient detail to substantiate that the overall proposed price is realistic, reasonable, and complete for the work proposed. The Offeror shall also include a narrative explanation of the proposed prices. The Agreement Officer may request additional information to determine pricing is fair and reasonable.

- Price proposals shall be submitted on a firm fixed price basis.
- The depth and breadth of the price proposal shall be determined based on
- the complexity of the requirement. At a minimum, include:
  - Labor Rates. Provide bases for which the estimated total labor hours were calculated.
  - Material/Equipment. Provide a list of the materials/equipment required to meet the technical solution proposed.
  - Indirect Costs. Provide estimate of the total indirect costs and supporting data on how this estimated was calculated (i.e. overhead, G&A, etc.)

a. Security Requirements. Although not to be evaluated, the Offeror shall identify existing or describe capability of obtaining personnel/facilities security clearances if necessary. DoD security management and handling requirements outlined in regulations such as DoD 5200.1-R and DoD 5400.07 apply to prototype other transactions.

b. Data Rights - All agreements that require data to be produced, furnished, acquired, or used in meeting performance requirements, must contain terms that delineate the respective rights and obligations of the Government and the contractor regarding the use, reproduction and disclosure of that data. The offeror shall identify any data rights assertions.

c. Key personnel qualifications. The proposal shall include resumes of the Program Manager and other Key Personnel who will be assigned to and work on the proposed project. If the Offeror does not presently employ personnel in the positions identified as Key, the Offeror must present a description of the terms of the commitment(s). The Offeror shall describe the proposed labor hours and labor categories relating to the performance of the SOW of Key Personnel.

2. PROPOSAL EVALUATION: ERDC will conduct an evaluation of the submitted proposal in response to the RFPP to determine if the SOW reflects the requirements developed during the collaboration period between the Government and offeror and the price is fair and reasonable. If both factors are met and the Government's price is available, an award of the proposal may be made. The Government reserves the right to select all, part, or none of the

proposal(s) received. The Government reserves the right to hold on to proposals that are not selected for award for potential future award.

3. **AWARD:** The Government intends to award one or more other transaction(s) from this project announcement.

Attachment 1

Entity Qualifications Under
Title 10 USC 4022
Other Transaction Agreement

For the purposes of assessing an organization's nontraditional status under the Other Transaction Authority, the definition of a nontraditional defense contractor below only applies if the organization is acting as the prime contractor.

1. Nontraditional Defense Contractor (NDC) Defined:

An entity that is not currently performing and has not performed, for at least the one-year period preceding the solicitation of sources by DoD for the procurement or transaction, any contract or subcontract for the DoD that is subject to full coverage under the cost accounting standards prescribed pursuant to section 1502 of title 41 and the regulations implementing such section (see 10 U.S.C. 2302(9)).

Note: Per the statutory definition, NDCs are all entities that have not performed under a narrowly defined set of circumstances within one year of solicitation of the current OT opportunity. In order for an entity to not qualify for NDC status, it would need to meet all elements of the prescribed definition within that time period. This includes performance of a DoD contract or subcontract subject to full cost accounting standards (CAS) coverage within one year prior to solicitation of the Prototype OT opportunity. The effect of this narrow definition, is that a large number of entities will fall into the NDC category, including nearly all small business concerns, and even those firms that work exclusively with DoD. This is in part due to the exemptions to CAS coverage under 41 U.S.C. § 1502 and FAR Part 30, which exempt commercial contracts, Firm Fixed Price contracts based on adequate price competition, and any contract or subcontract with a small business concern, amongst other exemptions. Further, even where an entity is not outright exempt from CAS coverage, the entity may not have been subject to "full" CAS coverage. This is because full CAS coverage only applies to firms that receive a single CAS-covered contract award of $50 million or more; or received $50 million or more in net CAS-covered awards during its preceding cost accounting period.

2. Offerors Certification:

Company Name:

CAGE:

Based on the foregoing definition of a nontraditional defense contractor, I hereby certify that Eaton is a (Check one)

nontraditional defense contractor or

traditional defense contractor**

Signature/Printed Name/Position Date

** If the prime offeror is a traditional defense contractor, see page 2**

3. Significant Participation

If the prime offeror is a traditional defense contractor, to qualify for a prototype Other Transaction Agreement award in accordance with 10 U.S.C. 4022, there must be at least one NDC or non-profit research institution participating to a significant extent in the prototype project.

Note: Non-traditional Defense Contractors can be at the prime level, team members, subcontractors, lower- tier vendors, or "intra-company" business units; provided the business is participating to a significant extent (i.e., is a key participant). Examples of what might be considered significant may include, but are not limited to, supplying a new key technology or product(s), accomplishing a significant amount of the effort, or in some other way causing a material reduction in the cost or schedule or increase in performance. Significance is determined by the AO with input from technical advisors for each prototype project.

The following NDC(s) and/or nonprofit research institution(s) will be participating in this prototype project to a significant extent:

a. Company Name:

CAGE:

Specifically address the ‘significant participation’ this partner will provide:

b. Company Name:

CAGE:

Specifically address the ‘significant participation’ this partner will provide:

c. Company Name:

CAGE:

Specifically address the ‘significant participation’ this partner will provide:

Based on the foregoing definition of a nontraditional defense contractor, I hereby certify that the above mentioned companies are NDCs participating to a significant extent.

_____

Signature/Printed Name/Position Date