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Program Solicitation

DARPA Tactical Technology Office (TTO)

DARPA-PS-24-25

September 4, 2024

PROGRAM SOLICITATION OVERVIEW INFORMATION

- **Federal Agency Name** – Defense Advanced Research Projects Agency (DARPA), Tactical Technology Office (TTO)
- **Funding Opportunity Title** – POWER Receiver Array Demonstration (PRAD)
- **Announcement Type** – Initial Announcement
- **Funding Opportunity Number** – DARPA-PS-24-25
- **Dates**
 - Posting Date: September 4, 2024
 - Proposers Day: September 11, 2024
 - Questions Due Date: September 13, 2024, by 5:00 PM, Eastern Time (ET)
 - Abstracts Due Date and Time: September 30, 2024, by 5:00 PM (ET)
 - Oral Presentations Due Date and Time: By Government request, estimated 3 weeks after Abstract submission

- *The Defense Advanced Research Projects Agency (DARPA) is soliciting innovative demonstration approaches for a ground-based receiver array for optical laser power to address challenges in the Persistent Optical Wireless Energy Relay (POWER) Program.*
- **A single award is anticipated**
- **Types of instruments that may be awarded** – Other Transaction (OT) for Prototype agreements
- **Special Requirements:** None identified.
- **Agency Contact**

The Solicitation Coordinator for this effort can be reached at:
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PROGRAM SOLICITATION
Defense Advanced Research Projects Agency (DARPA)
POWER Receiver Array Demonstration (PRAD)

1. PROGRAM INFORMATION

1.1. Background: Energy Web Dominance (EWD)

Energy is a fundamental currency in the battlespace that is central to causing and transporting military effects. Generating and delivering military effects can be seen as part of an interconnected web of energy transactions. Dominating this energy web to more rapidly and reliably move energy through the battlespace is the essence of warfare. The optical receiver technologies to be developed by the POWER Receiver Array Demonstration (PRAD) are a critical hardware component for optical power beaming links. Other power beaming modalities such as radio frequency or acoustic waves are the focus of ongoing DARPA research that may lead to future programs but are not within scope of PRAD.

An opportunity for significant disruption exists via leveraging power beaming for near-instantaneous energy transport in a resilient, multi-path network. Additional background can be found at <https://www.darpa.mil/news-events/2022-10-05b>.

A depiction of a possible future networked energy web is shown in Figure 1.

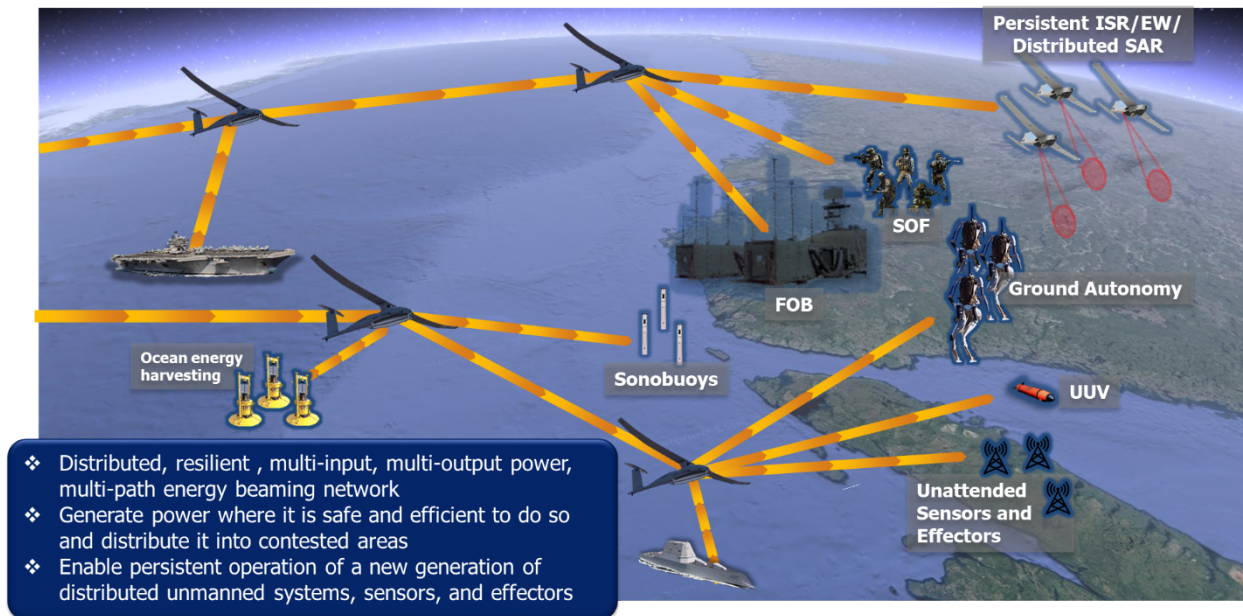


Figure 1. Depiction of an EWD vision, focusing on POWER nodes as a backbone to the network and scaled PRAD receivers at the end points of use.

1.2. Program Description/Scope

Overall PRAD Program Scope

The PRAD program seeks to develop and demonstrate a laser power beaming receiver. The

envisioned Energy Web consists of three major component types: transmitters, relays, and receivers.

Optical laser power beaming technology delivers energy over long distances via transmission by laser beam that is then directed towards a receiving station. The receiving station is equipped with photovoltaic (PV) cells or similar devices that capture the laser energy and convert it back into electrical power.

A ground-to-ground demonstration is crucial for proving the feasibility and effectiveness of optical laser power beaming technology, particularly in validating the PV receiver array and its efficiency, for several key reasons:

1. Real-World Conditions Testing:

A ground-to-ground demonstration allows the technology to be tested under real-world environmental conditions, such as varying weather, atmospheric interference, and temperature fluctuations. These factors can significantly impact the performance of the laser transmission and the efficiency of the PV receiver array. By conducting ground-based demonstrations, researchers can evaluate how well the PV array captures and converts laser energy under different conditions, providing valuable data on its reliability and efficiency in practical scenarios.

2. Alignment Validation:

In a ground-to-ground setup, maintaining accurate alignment between the laser source and the PV receiver array is critical, especially over longer distances. This demonstration tests the system's ability to maintain beam alignment and stability, which is essential for maximizing energy capture and minimizing losses.

3. Efficiency Measurement in a Controlled Environment:

Ground-to-ground demonstrations provide a controlled environment where the efficiency of the PV receiver array can be precisely measured. This setup allows researchers to directly assess the conversion efficiency of the PV cells and the entire array under specific power levels and distances. By analyzing the efficiency of the array in a ground-based setting, developers can identify and address any inefficiencies or technical challenges before scaling up the technology for more complex applications and environments.

4. Scalability and Practical Application Insights:

These demonstrations also offer insights into the scalability of the technology. By proving that the PV receiver array can efficiently convert laser energy in a ground-based scenario, researchers can build confidence in the system's potential for larger-scale and more demanding applications. The results from these demonstrations inform the design and development of more advanced systems that could be used in military, aerospace, or remote power delivery applications.

In summary, ground-to-ground demonstrations are vital for validating the performance, efficiency, and reliability of the PV receiver array in optical laser power beaming systems. The demonstrations provide essential data and practical experience needed to refine the technology and establish its viability for broader commercial and military applications.

This Program Solicitation (PS) calls specifically for Abstracts to be submitted per the timeline on page 2. Abstracts will be reviewed by the Government; selected proposers will be asked to provide an Oral Presentation, sometime in October 2024. Oral Presentations will be reviewed by the Government, and if selected, may result in an award of an Other Transaction (OT) for prototype agreement.

This PS encourages solutions from all responsible sources capable of satisfying the Government’s needs, including large and small businesses, *nontraditional defense contractors* as defined in 10 U.S.C. § 3014, and *research institutions* as defined in 15 U.S.C. § 638.

1.3. Acquisition Strategy

The Government’s aim is to lower the administrative burden to entry, reduce program risk, foster competition, and have performing teams begin work faster. To facilitate this objective, the Government will use the following acquisition process for PRAD:

1. Abstracts: Through this solicitation, the Government requests proposers to submit Abstracts (see Section 3.2) in response to this PS. The Government will review all submitted Abstracts for technical comprehension and ability (see Section 3.3). Selected proposers will be invited to provide an Oral Presentation (see Section 3.4) to the Government.
2. Oral Presentations: Upon the Government’s request, proposers will have the opportunity to present their proposal to the DARPA program team. The Government will evaluate all Oral Presentations (see Section 3.5) and anticipates that selected proposers will enter into contract negotiations for an OT award with a term of 6 months and potential additional opportunities extending out to 30 additional months.
3. Award (6 months): PRAD will use a limited-negotiable OT mechanism for award. This effort will focus on development and delivery of a demonstration receiver in FY25.

The process and requirements for Abstract and Oral submissions are detailed in Section 2.1 of this PS. The anticipated timeline and major milestone for the acquisition strategy laid out above is illustrated in Figure 2.

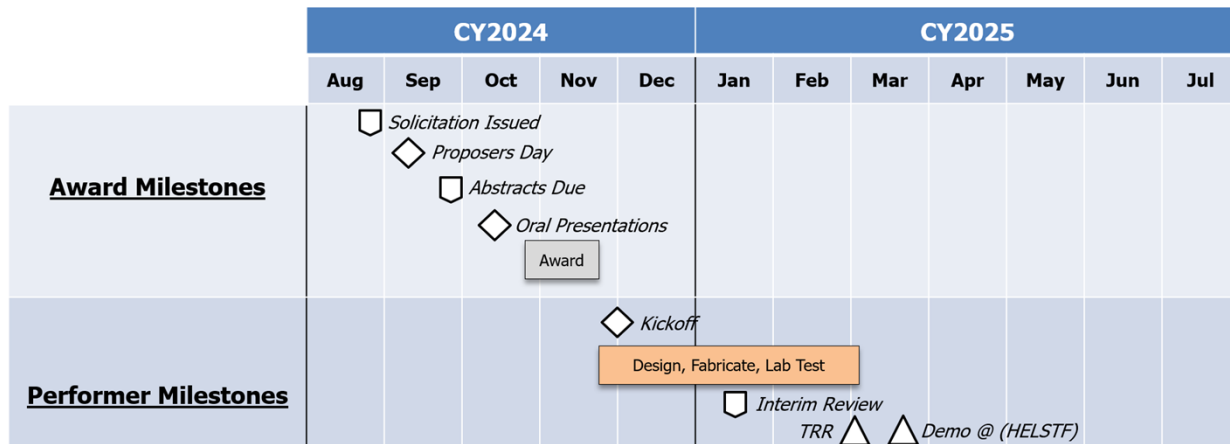


Figure 2. Anticipated acquisition strategy timeline.

1.4. Program Structure

PRAD will be executed in parallel with the ongoing DARPA POWER Phase 1 effort, with future opportunities for expansions in POWER Phase 2 and Phase 3. PRAD will entail the development and delivery of a laser power receiver for use as part of the POWER Phase 1 risk reduction campaign. Future efforts will build on PRAD's effort to produce and deliver a receiver for the POWER Phase 2 demonstration, and Phase 3 will build on Phase 2's results to produce and deliver a receiver for the POWER Phase 3 demonstration. Performers will work with the Government team throughout the program lifecycle to convey stakeholder interests, facilitate testing as required, and connect with the operational community.

Milestone payments for PRAD will be as follows: \$175k following kickoff, \$50k at Test Readiness Review (TRR), and \$125k upon receipt of all testing data and deliverables. The Demonstration event is expected to occur at a government site, the High Energy Laser Systems Test Facility (HELSTF), located at White Sands Missile Range (WSMR) in New Mexico, with Government and industry team observers. DARPA and the Government team expect to interact virtually with the Performer teams in weekly program update meetings. Program Kick-off, TRR, and Close-out events are expected to be held virtually, at the performer's facilities, or at DARPA in Arlington, Virginia.

1.5. Program Metrics/Goals

Performers are challenged to surpass existing benchmarks for laser power receiver scalability, efficiency, effective power density, portability, and durability.

PRAD metrics with threshold and objective goals are as shown in Table 1.

Table 1. PRAD metrics and threshold/objective goals.

METRIC	Threshold	Objective
Receiver array area	0.09 m ²	> 0.36 m ² (not to exceed 1.5 m ²)
Optical Input Power Capability	1 kW @ > 2 kW/m ²	> 2 kW @ > 5 kW/m ²
Output Electrical Power	> 150 W @ 1 kW Optical	> 300 W @ 1 kW Optical
Duty Cycle	90% (90 seconds on, 10 seconds off) for ten minutes	100% for > 4 hours

Additionally:

- Solution shall successfully interface with HELSTF as follows:
 - Threshold: Capable of passively harvesting energy from the WSMR Demonstrator Laser Weapon System (DLWS) laser without interference to or from POWER relay handshaking, beaconing, and interlock systems.
 - Objective: Capable of harvesting energy from the WSMR DLWS laser while actively participating in and exchanging information with the POWER relay handshaking, beaconing, and interlock systems.
- Solution shall exhibit minimized adverse performance impacts in the presence of

reasonable disuniform illumination, as may occur with a Gaussian beam and scintillation resulting from turbulence.

- Solution shall weigh no more than 40 kg and be two-person portable.
- Solution shall remain fully functional (meeting metrics in Table 1) during outdoor conditions during test campaign, anticipated to be 5 days.

2. PS AUTHORITY

This PS may result in the award of an OT for Prototype agreement, which can include not only commercially available technologies fueled by commercial or strategic investment, but also concept demonstrations, pilots, and agile development activities that can incrementally improve commercial technologies, existing Government-owned capabilities, and/or concepts for broad defense and/or public application(s). The Government reserves the right to award an OT for Prototypes under 10 U.S.C. § 4022 or make no award at all. In all cases, the Government Agreement Officer shall have sole discretion to negotiate all agreement terms and conditions with selected offerors. The OT agreement will not require cost sharing unless the offeror is a traditional defense contractor who is not working with a non-traditional defense contractor participating in the program to a significant extent.

2.1. PS Procedure

In response to this solicitation, offerors are asked to submit a 3-page Abstract as described in Section 3.2. This process allows DARPA to ascertain (1) whether the proposers understand the key challenges of the PRAD program, and (2) whether they are capable of executing a proposed demonstration. Specific evaluation criteria used to make the assessment can be found in Section 3.3. If DARPA finds that both of these conditions are met, it may request the offeror participate in an Oral Presentation to DARPA, as described in Section 3.4, where the proposed technical solution will be evaluated. Specific evaluation criteria used to make the assessment can be found in Section 3.5. After the Oral Presentations, DARPA will make a determination as to which offerors may be awarded an OT for Prototypes agreement. The Government will not pay offerors responding to this PS for the costs associated with Abstract submissions or Oral Presentations.

Abstracts (result if successful: invitation to participate in Oral Presentations)

Abstracts shall be submitted as specified in Section 3 of this PS. The Government will evaluate abstracts against the criteria stated in this PS.

It is important to note that offerors must submit an Abstract in response to this solicitation to be considered for participation in the PRAD program. Offerors will not be invited to provide an Oral Presentation or be included in any further progression of the program, without participating in the Abstract phase of the solicitation.

Oral Presentations (result if successful: PRAD award (6-month period of performance), with future opportunities for POWER Phase 2 and Phase 3.)

Offerors responding to this PS may be invited to further explain their proposed approach and solution via an Oral Presentation. Oral Presentations will take place approximately three weeks after notification from the Government that an Oral Presentation is requested. Additional instructions (to include due date and presentation date/time) will be provided within the official invitation to participate in Oral Presentations.

Award

DARPA will review Oral Presentations to determine which proposed solutions sufficiently meet the evaluation criteria stated in Section 3.5. Upon favorable review, and subject to the availability of funds, the Government may award an OT for Prototypes under 10 U.S.C. § 4022.

To speed up negotiations, proposers must include a signed OT with the Oral Presentation submission, with minimal changes, to which they are willing to sign up immediately if chosen for award. Only a Government Agreement Officer has the authority to enter into or modify a binding agreement on behalf of the United States Government. The agreement will be provided in the abstract selection notification.

3. GUIDELINES FOR ABSTRACTS, ORAL PRESENTATIONS, AND PROPOSALS

3.1. General Guidelines

- a. Do not include elaborate brochures or marketing materials; only include information relevant to the submission requirements or evaluation criteria.
- b. Use of a diagram(s) or figure(s) to depict the essence of the proposed solution is permitted and encouraged.
- c. All Abstracts, Oral Presentations, and Proposals shall be properly marked and are expected to be unclassified/Controlled Unclassified Information (CUI). Requests may be submitted to DARPA-PS-24-25@darpa.mil for permission and procedure to submit relevant classified information.
- d. Offerors are responsible for clearly identifying proprietary information. Submissions containing proprietary information must have the cover page and each page containing such information clearly marked with a label such as “Proprietary” or “Company Proprietary.” NOTE: “Confidential” is a classification marking used to control the dissemination of U.S. Government National Security Information as dictated in Executive Order 13526 and should not be used to identify proprietary business information.
- e. Questions must be sent to DARPA-PS-24-25@darpa.mil no later than the Questions Due Date, 5:00 PM (ET). Individual questions will be responded to, however, if the proposers are interested in receiving a compiled list of all questions and answers asked from the time of Industry day, proposers must submit their request to DARPA-PS-24-25@darpa.mil and will receive the compiled list via DoD SAFE as responses may contain CUI information.
- f. Send Abstracts to DARPA-PS-24-25@darpa.mil by Abstracts Due Date, 5:00 PM (ET). Files containing Controlled Unclassified Information (CUI) must be encrypted when sending over the Internet. If e-mail encryption is infeasible, contact DARPA-PS-24-25@darpa.mil within 48 hours before the deadline to arrange another method of delivery, such as DoD SAFE.
- g. Submissions sent through other mediums, channels, or after the prescribed PS deadline will not be considered, reviewed, nor evaluated.

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- h.** Offerors providing Abstracts that are not invited to an Oral Presentation will be notified in writing as soon as practicable.
- i.** FFRDCs are subject to applicable direct competition limitations and cannot propose to this PS in any capacity unless they meet the following conditions: (1) FFRDCs must clearly demonstrate that the proposed work is not otherwise available from the private sector; and (2) FFRDCs must provide a letter on official letterhead from their sponsoring organization citing the specific authority establishing their eligibility to propose to Government solicitations and compete with industry, and their compliance with the associated FFRDC sponsor agreement's terms and conditions. This information is required for FFRDCs proposing to be prime contractors or subcontractors. FFRDCs proposing as prime awardees must be able to accept an OT for prototype project as the award instrument. FFRDCs that can only be funded through their existing sponsor contracts should not propose directly to an OT issued under this PS.

3.2. Abstract Content

- a.** Abstracts should not exceed three (3) single-sided 8.5" by 11" written pages using 12-point Times New Roman font with 1" margins all around.
- b.** Abstracts must include the following:

 - 1. *Title page:*** Offeror Name, Title, Date, Point of Contact Name, E-Mail Address, Phone, Address, and Commercial and Government Entity (CAGE) Code. (The Title Page does not count against page limits).

 - The offeror shall include a statement that no people on the offeror's team work for DARPA as Scientific Engineering Technical Assistance (SETA), Advisory and Assistance Services (A&AS) or similar support services on an active contract or subcontract (including those awarded through DARPA agents); or list which offices the proposer supports and identify the prime contract numbers. DARPA policy prohibits support contractor individuals and entities from concurrently working as research and development performers, unless potential organizational conflicts of interest are identified, eliminated, or appropriately mitigated, and granted a waiver. Include this statement on the title page; it will NOT count as part of the three (3) written pages limit.
 - The offeror shall include a statement that identifies and substantiates which of the following condition(s) are met to permit the use of OTs for Prototypes in accordance with 10 U.S.C. § 4022 (d)(1):

 - (A) There is at least one nontraditional defense contractor or nonprofit research institution participating to a significant extent in the prototype project;

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- (B) All significant participants in the transaction other than the Federal Government are small businesses (15 U.S.C. § 638) or nontraditional defense contractors;
- (C) At least one third of the total cost of the prototype project is to be paid out of funds provided by sources other than the Federal Government; or
- (D) The senior procurement executive for the agency determines in writing that exceptional circumstances justify the use of a transaction that provides for innovative business arrangements or structures that would not be feasible or appropriate under a contract or would provide an opportunity to expand the defense supply base in a manner that would not be practical or feasible under a contract.

2. **Technical Understanding:** Provide a summary of the technical goals of PRAD. This summary shall be stated in the offeror's own words without any "copy and paste" of this solicitation. The goal is for the offeror to demonstrate clear understanding of PRAD's purpose and goals. The section shall be no more than 1 page and is included in the three (3) written pages limit.

- **Cost and Schedule Rationale:** Provide the anticipated labor/materials breakdown and one (1) schedule that shows how the demonstration will be executed within the \$350k DARPA-funded cost target and 6-month period of performance. Any secured or anticipated funding from other sources should be indicated.

- **Technical Challenges:** Identify specific technical challenges faced in PRAD. The offeror should include what they think the primary risks are to successful development of the PRAD program. The section shall be no more than 1 page and is included in the three (3) written pages limit.

3. **Technical Ability:** Detail the offeror's team and organization and explain the ability to be successful at achieving the goals, if selected, for PRAD. The offeror may include past experience, organizational capabilities, team members' qualifications, or anything else that demonstrates competence in designing and executing PRAD. The offeror should include information related to the ability to safely produce, deliver, and demonstrate a laser power beaming receiver. The section shall be no more than 1 page and is included in the three (3) written pages limit.

4. **Quad Chart Summary:** One of the three (3) written pages must be a quad chart that summarizes the development and demonstration approach and which follows the format shown in Figure 3. No new technical information should be introduced in the quad chart. For ease of submission, a fillable quad chart will be provided via SAM.gov.

Team or company logo goes here

[Project Name (Acronym or Short Name)]

Optional 2nd logo (do not use the DARPA logo)

Insert picture(s) here of technology or approach

["Bumper Sticker" Takeaway Summarizing Benefits/Goals of Approach (15 words or fewer)]

Participants:
Performing Org(s): [Company, university, etc.]
Gov't Contributors: [(if applicable) Service offices, DOE, NASA, etc.]

Quantitative Success/Go-NoGo Criteria:

- Criterion #1 [Description, (units)]; Start [value]; End Min [value]; End Obj [value]. So far: [value]
- Criterion #n [Description, (units)]; Start [value]; End Min [value]; End Obj [value]. So far: [value]

POC: First Last, email@org.domain, phone number
 Alternate POC: First Last, email@org.domain, phone number

Objective:
 [Overall goal: key advancement(s), enabling insight(s) leveraged, technical risk(s) reduced, etc.]

Technology:

- [Component 1: Description]
- [Component 2: Description]
- [Integration information]

Product:
 [Description of final system]

The So What:
 [Describe the impact effort will have]

Phase 1 (Base) Funding	Kick-off	TRR	Close-out	Total
DARPA	\$175k	\$50k	\$125k	\$350k
[Add'l funding source #1, if applicable]	\$xxx	\$xxx	\$xxx	\$xxx
[Add'l funding source #2, if applicable]	\$xxx	\$xxx	\$xxx	\$xxx

Schedule Highlights **Date**

(anticipated) Period of Performance Start / Authority to Proceed (ATP)	~2024-11-15
Kick-off	ATP + -21 days
Test Readiness Review	ATP + 4 months
Demonstration	ATP + 5 months
Close-out	ATP + 6 months

Figure 3. Quad chart template.

3.3. Abstracts – Process and Basis of Evaluation

Abstract evaluation criteria are listed in order of importance. Individual Abstracts will be evaluated against the evaluation criteria described below:

- a. **Technical Understanding:** The proposed technical understanding is accurate, and key technical challenges and risks are identified.
 - **Cost and Schedule Rationale:** The offerors supply concise, credible summary rationale for labor and material costs and schedule considering cost and schedule constraints.
- b. **Technical Ability:** The offerors demonstrate an ability, if selected, to achieve the goals of the PRAD program.

Abstracts will be evaluated by DARPA using the evaluation criteria listed above. DARPA will use the evaluation criteria to assess the strengths, opportunities, and weaknesses of the abstracts and, ultimately, use that assessment to determine the selection of proposers offered the opportunity to proceed to Oral Presentations. The Government will endeavor to complete the evaluation of Abstracts within ten (10) business days of the closing of the submittal period. As stated above, offerors are required to submit an Abstract for evaluation by DARPA to minimize effort and reduce the potential expense of preparing an unsuccessful proposal. DARPA will respond to the 3-page Abstract with a statement as to whether DARPA is interested in seeing an Oral Presentation (approximately 30 minutes presentation, 15 minutes question and answer period, with an approximately 15 minutes government evaluator only caucus in between). If DARPA is not

interested in an Oral Presentation, it will state this in an email to the offeror. Upon review of Abstracts, the Government may elect to invite all, some, or none of the offerors to Oral Presentations. *Only Abstract offerors invited by DARPA to participate in Oral Presentations are eligible to provide one.*

3.4. Oral Presentations Content

If DARPA expresses interest in an Abstract, the offeror will be invited to provide an Oral Presentation to provide further details on its proposed solution. Specific instructions (including content submission guidelines) will be provided in the invitation to participate. If selected, offerors can expect to be asked to provide the following information (offeror can address them in any order they choose):

- a. Company introduction/overview: Provide information regarding company and key personnel dedicated to the program and how their past performance and qualifications will contribute to the technical approach. Identify and explain efforts of similar scope and complexity.
- b. Technical Approach: Provide a technical approach to accomplish the objectives and scope laid out in this solicitation. This should include at least the following elements:
 1. Description of the offeror's overall proposed solution, to include CONOPS (how it will be employed in the demonstration setting), anticipated capability, and summary of innovative claims.
 2. Description of innovative claims and how they will achieve PRAD objectives and metrics. These should at least include:
 - Scalability and/or replication of common modular elements to support receivers at a range of future power levels, for example up to 100 kW.
 - Approaches to effect current and future receiver efficiency gains in the face of incoming energy variability and disuniformity.
 - Eventual portability and ruggedization of receivers.
 3. Technical Risks and Mitigation Strategy.
 4. Program development timeline ensuring to highlight technical and programmatic milestones.
 5. Safety and security integration into technical approach.
- c. Price breakdown. Cost information should be submitted as a separate cost spreadsheet and does not count towards the slide/page count for Oral Presentations. The cost spreadsheet shall include all proposed material purchases with supporting documentation such as recent purchase orders, commercial catalogs, etc. Cost overview should be contained in one slide that will count against the limit.
- d. Teaming/subcontractors: Identify any teammates or subcontractors expected to comprise the team. Identify their roles, any key personnel, and how their past performance and qualifications will contribute to the technical approach. Include required or unique capabilities that enable technical approach.
- e. Data Rights: Identify the intellectual property rights to be given to the Government under

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this agreement for the components of the proposed solution. For intellectual property (IP) developed prior to the start of the agreement that will be utilized during program activities, clearly identify that IP and the anticipated level of IP rights that will be given to the Government. For IP developed during the agreement, the anticipated level of IP rights that will be given to the Government is Unlimited Rights.

- f. PRAD: Value Assessment Questions for Proposers (answers to be included as a one-page annex not included in the 15-slide limit)
 1. Please provide your understanding of current technology in this space, and how it has informed or influenced your proposed technical solution.
 2. How does your proposed solution deliver increased capability beyond what is possible today?
 3. What commercial technology, best practices or processes do you plan to employ to deliver value to the Government?
 4. How would your proposed solution, if successful, enable the commercial markets to do that they cannot already?
 - What future value does this technology offer to the commercial sector?
 - Is your solution disruptive to the market, or does it provide incremental improvements to current practices?
 5. How does DARPA engaging in this program accelerate the timeline for value, schedule, technical debt, and transition to commercial or DoD marketplaces?

- g. Signed OT submission, with minimal changes if chosen for award. Only a Government Agreement Officer has the authority to enter into or modify a binding agreement on behalf of the United States Government. (The signed OT will not be included in the 15-slide limit).

In addition to the above required areas, the Government may request the offeror provide additional information or detail with respect to its Abstract. This information will be provided in the abstract selection letter. Offerors should expect to have approximately 30 minutes for the presentation and approximately 15 minutes to address any questions from the Government panel. Oral Presentations are subject to the following constraints:

- No more than 15 slides in PDF or PowerPoint format
- No smaller than 12-point font
- Video demonstrations are permitted
- Example hardware articles are permitted and encouraged but must be approved in advance by DARPA Security
- Additional required artifacts not included in page count:
 - Any redlines to the model OT Agreement
 - Non-Traditional Defense Contractor (NTDC) Attestations (to include both qualifying information, and participation details)
 - See draft OT article (XIX) (provided with successful abstract letter)
 - All proposed cost share should be reflected in the milestones of the OT

- Value analysis responses (questions below)
- Completed OT representations and certifications
- Loaded integrated master schedule to include staffing plan showing proposed labor hours broken down by task
- All presented material is to be submitted to DARPA-PS-24-25@darpa.mil at least 48 hours before the start of the Oral Presentation. Files containing CUI must be encrypted when sending over the Internet. If the file size is too large for email, send an email to DARPA-PS-24-25@darpa.mil to request a DoD SAFE link.

3.5. Oral Presentations – Process and Basis of Evaluation

Oral Presentation evaluation criteria are listed in order of importance. Individual presentations will be evaluated against the evaluation criteria described below:

- a. **Technical Approach:** The proposed technical approach is reasonable, feasible, and innovative. The approach demonstrates an innovative yet feasible approach to address the identified technical risks and challenges and meets or exceeds program metrics.
- b. **Relevant Qualifications:** Personnel and/or company experience and qualifications are accurate, relevant, and demonstrate the ability of the offeror to meet the technical goals of the program.
- c. **Cost and Schedule:** The proposed solution is reasonable and realistic.
- d. **Intellectual Property:** Extent to which permissive or restricted data assertions allow the Government to realize the objectives of the PRAD program.

The Government intends to give proposers the option to attend Oral Presentations in-person or virtually. Note, in either case, the Government reserves the right to record presentations. The Government will evaluate information provided in the content submission (documentation), the Oral Presentation, and Q&A session as basis for evaluation. Oral Presentations will be evaluated by the PRAD Program Manager with support from a panel composed of Government subject matter experts (SMEs).

After completing evaluation of Oral Presentations, DARPA will: 1) make an OT award; or 2) inform the offeror that its proposed concept/technology/solution is not of continued interest to the Government and they are no longer considered for participation in the program. If DARPA does not intend to issue an award to an offeror, DARPA may provide brief feedback to the offeror regarding the rationale for the decision.

4. AWARDS

4.1. General Guidelines

Upon favorable review of the proposal and subject to the availability of funds, the Government may choose to award an OT for Prototypes agreement for PRAD.

The Agreement Officer reserves the right to negotiate directly with the offeror on the terms and conditions prior to execution of the resulting OT agreement, including payment terms, and will execute the agreement on behalf of the Government. A copy of the draft OT agreement will be provided with a successful abstract letter. In order to speed up negotiations, offerors selected for Oral Presentations will be required to either attest to compliance of all OT agreement articles or

note those they take exception to. Be advised, only a Government Agreement Officer has the authority to enter into, or modify, a binding agreement on behalf of the United States Government.

In order to receive an award:

- a. Offerors must have a Unique Entity ID number and must register in the System for Award Management (SAM). Offerors are advised to commence SAM registration upon notification of entry to the competition.
- b. Offerors must also register in the prescribed Government invoicing system (Wide Area Work Flow: <https://wawf.eb.mil/xhtml/unauth/registration/notice.xhtml>). DARPA Contracts Management Office (CMO) personnel will provide assistance to those offerors from whom a proposal is requested.
- c. Offerors must be determined to be responsible by the Agreement Officer and must not be suspended or debarred from award by the Federal Government nor be prohibited by Presidential Executive Order and/or law from receiving an award.
- d. Being asked to submit a proposal does not guarantee that an offeror will receive an award. The Government reserves the right not to make an award.

4.2. Controlled Unclassified Information (CUI) and Controlled Technical Information (CTI) on Non-DoD Information Systems

Further information on CUI identification, marking, protecting and control, to include processing on Non-DoD Information Systems, is incorporated herein and can be found at www.darpa.mil/work-with-us/additional-baa. A POWER CUI Guide that covers PRAD has been established to help offerors determine CUI thresholds for information relevant to, and technologies developed under the program. As CTI is anticipated for this program, foreign proposers are encouraged to understand U.S. export law and have a plan in place to obtain export licenses when necessary. Possible methods include teaming with a U.S. prime and/or having a U.S. subsidiary/parent company. The POWER CUI will be provided to Proposers upon qualified request.

4.3. Representations and Certifications

All offerors are required to submit DARPA-specific representations and certifications for Prototype OT awards to be eligible to receive an OT award. See <http://www.darpa.mil/work-with-us/reps-certs> for further information on required representations and certifications for Prototype OT awards.

4.4. Competition Sensitive Information

DARPA policy is to treat all submissions as competition sensitive, and to disclose their contents only for the purpose of evaluation. Restrictive notices notwithstanding, during the evaluation process, submissions may be handled by support contractors for administrative purposes and/or to assist with technical evaluation. All DARPA support contractors performing this role are expressly prohibited from performing DARPA sponsored technical research and are bound by appropriate nondisclosure agreements. Input on technical aspects of the proposals may be solicited by DARPA from non-Government consultants/experts who are strictly bound by the appropriate non-disclosure requirements.

4.5. Intellectual Property / Data Rights

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The Government will require Government Purpose rights, as defined in Section 5 of this PS, to IP developed under the program.

4.6. Procurement Integrity Act (PIA)

All awards under this PS shall be treated as Federal Agency procurements for purposes of 41 U.S.C. Chapter 21. Accordingly, the PS competitive solicitation process and awards made thereof must adhere to the ethical standards required by the PIA.

5. PS DEFINITIONS

“Data” refers to recorded information, regardless of form or method of recording, which includes but is not limited to, technical data, software, mask works and trade secrets. The term does not include financial, administrative, cost, pricing or management information and does not include inventions.

“Government Purpose” means any activity in which the United States Government is a party, including cooperative agreements with international or multi-national defense organizations, or sales or transfers by the United States Government to foreign Governments or international organizations. Government purposes do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data for commercial purposes or authorize others to do so.

“Unlimited rights” means rights to use, modify, reproduce, perform, display, release, or disclose technical data in whole or in part, in any manner, and for any purpose whatsoever, and to have or authorize others to do so.

“Nontraditional Defense Contractor” is defined in 10 U.S.C. § 3014 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 the 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 41 U.S.C. § 1502 and the regulations implementing such section. This includes all small business concerns under the criteria and size standards in 15 U.S.C. § 632 and 13 C.F.R. Part 121.

“Other Transaction” refers to the type of OT that may be awarded as a result of this PS. This type of OT is authorized by 10 U.S.C. § 4022 for prototype projects directly relevant to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components, or materials proposed to be acquired or developed by the DoD, or for the improvement of platforms, systems, components, or materials in use by the armed forces.

“Prototype Project” is described in the DoD Other Transactions Guide (Version 1, Nov. 2018) issued by the Office of the Under Secretary of Defense for Acquisition and Sustainment: <https://www.dau.edu/cop/ot/documents/dod-other-transactions-guide>

“Small Business Concerns” is defined in the Small Business Act (15 U.S.C. § 632).

6. ACRONYMS

- CMO: Contracts Management Office
- CONOPS: Concept of Operations
- CUI: Controlled Unclassified Information
- DARPA: Defense Advanced Research Projects Agency
- DoD: Department of Defense

UNCLASSIFIED

ET: Eastern Time
GFE: Government Furnished Equipment
HELSTF: High Energy Laser System Test Facility
IP: Intellectual Property
IV&V: Independent Verification and Validation
kg: Kilogram
kW: Kilowatt
L/min: Liters per Minute
MIL-SPEC: Military Specification
mL: Milliliter
mm: Millimeter
OT: Other Transaction
PIA: Procurement Integrity Act
POWER: Persistent Optical Wireless Energy Relay
PRAD: POWER Receiver Array Demonstration
PS: Program Solicitation
Q&A: Question and Answer
R&D: Research and Development
ROM: Rough Order of Magnitude
SCG: Security Classification Guide
SME: Subject Matter Expert
SOA: State of the Art
S&T: Science and Technology
SWaP: Size, Weight, and Power
TA: Technical Area
TRR: Test Readiness Review