

Special Notice (SN) DARPA-SN-23-03: Persistent Optical Wireless Energy Relay (POWER)
Proposers Day
DATE: October 24, 2022
Registration Website: <https://creative.gryphontechnologies.com/darpa/tto/power/pd>
E-mail: DARPA-SN-23-03@darpa.mil

POWER PROPOSERS DAY:

The Defense Advanced Research Projects Agency (DARPA) Tactical Technology Office (TTO) is sponsoring a Proposers Day to provide information to potential proposers on the objectives of the POWER program coinciding with the Broad Agency Announcement (BAA). The Proposers Day will be held on **October 24, 2022**, in the **DARPA Conference Center (DCC)**, located at **675 North Randolph St, Arlington, VA 22203** from **9 a.m. to 5 p.m. Eastern Time (ET)**. Advance registration is required.

PROGRAM OBJECTIVE AND DESCRIPTION:

Energy is a fundamental currency in the battlespace. It is central to causing and transporting military effects. Recognizing energy as a key aspect of warfare provides a new optimization surface where we can balance energy generation, storage, and distribution to more effectively achieve military objectives. In this way, generating and delivering military effects can be seen as an interconnected web of energy transactions. Dominating the energy web to more rapidly and reliably move energy through the battlespace and deliver military effects provides a decisive advantage. We perceive an opportunity for significant disruption by leveraging power beaming for near-instantaneous energy transport in a resilient, multi-path network.

The objective of the POWER program is to design and demonstrate airborne optical energy relays. These relays are a critical component necessary to allow ground-sourced lasers to be coupled with high-altitude, efficient long-range transmission. Additionally, relays will enable future multi-path wireless energy networks. In a final demonstration, relays integrated onto existing platforms will validate long-distance transmission from a ground-sourced laser through multiple airborne nodes and back down to a ground receiver. The focus of POWER is developing an effective relay payload, which can efficiently and accurately redirect optical energy, correct optical wavefront aberrations to maximize beam quality, and selectively harvest energy for platform power. In addition, POWER will explore a conceptual design for a future optimized optical power relay platform. Offboarding energy storage and generation from platforms opens up a novel design space where platform capabilities are no longer dependent on the quantity of fuel carried. This provides an opportunity for small, inexpensive distributed platforms with significant capabilities such as unlimited range or endurance. The relays developed by POWER will demonstrate characteristics necessary for use in a larger, scalable airborne wireless power beaming network.

REGISTRATION INFORMATION:

Proposers Day will be held at the DARPA Conference Center (675 North Randolph Street, Arlington, VA 22203-2114) on October 24, 2022, from 9a.m. to 5 p.m. ET. Check-in begins at 8 a.m.

The Proposers Day will be unclassified and open to the general public.

Upon entry to the event, all attendees will be required to present Government-issued photo identification that is compliant with the REAL ID Act of 2005, and an acceptable proof of U.S. citizenship or permanent resident status (Green Card holders). Examples may include:

- State-issued driver's license, or,
- U.S. passport, or,
- U.S. Permanent Resident card, or,
- Copy of birth certificate.

See <https://www.darpa.mil/policy/visitor-information> for additional information on identification requirements for entry.

DARPA Form 104 "DARPA Conference Center Visitor Requirements for Unclassified Meetings," must be completed for all unclassified events and submitted to Security and Intelligence Directorate (SID) and the Visitor Welcome Center (VWC) via SID-CPC@darpa.mil.

NOTE: Before individuals transmit Personally Identifiable Information (PII) or other sensitive data to DARPA, it is recommended that they apply appropriate physical, administrative, and technical protocols to safeguard their privacy. DARPA will secure all received PII and sensitive personal data in a controlled environment and protect it from unauthorized access, use, or disclosure.

Visitors to DARPA must adhere to the DARPA Visitor COVID-19 Policy. This policy is subject to change, and should therefore be monitored for updates. The latest version is published at <https://www.darpa.mil/policy/visitor-information>

Non-U.S. citizens not representing a foreign government are required to submit a U.S. Permanent Resident and Foreign National Visit Request (DARPA Form 60 <https://dtsn.darpa.mil/eform60>). Non-U.S. citizens who are representing a foreign government in an official capacity are required to submit an official Foreign Visit Request via their respective Embassy in Washington, DC. Failure to complete and submit these forms by 5:00 p.m. EDT on October 19, 2022 may result in the cancellation of existing registrations.

Participants must register for the Proposers Day through the following website: <https://creative.gryphontechnologies.com/darpa/tto/power/pd>

Due to space limitations of the facility, registration will be available on a first-come, first-served basis until attendance capacity is reached. Entities are limited to two primary registrants and three waitlist registrants. Depending on the number of registered participants by the registration close date, one waitlisted registrant per entity will be invited on a first-come, first-served basis. If room is still available after the first waitlisted individual from each entity is invited, a second will be let in on a first-come, first-served basis. Waitlisted registrants will be alerted one week prior to the event with their status. At the entity's discretion, a waitlisted registrant may substitute for the primary registrant on a one-for-one basis at the time of check-in (e.g., in the event the primary is unavailable). Waitlisted registrant(s) must ensure their visit request and clearance have been sent in advance, and be prepared to show proper forms of identification per above instructions; otherwise, entrance may not be granted. Registrants will designate their status as primary or secondary as part of their registration through the website.

PLEASE NOTE: REGISTRATION CLOSES ON October 19, 2022, at 5 p.m. ET. Visit requests, security clearances, and other applicable documents should also be sent to DARPA by this time.

Attendees who would like to present company overviews, discuss technology expertise, and/or discuss teaming opportunities may request to do so in scheduled presentations at the event. Presentations may contain 5 slides and presenters should plan on being limited to fifteen (15) minutes each (to include logistical issues) per organization. Attendees should contact DARPA-SN-23-03@darpa.mil, as soon as possible to request a presentation time at the Proposers Day; requests must be received no later than the registration cutoff date.

All presentation materials must be approved in advance by both the organization that funded the research and the DARPA Program Manager. The DARPA Program Manager will screen the proposed material for controlled unclassified information (CUI) and approve presentations in advance of the event. It is the presenter's responsibility to ensure that all material they plan to present at the Proposers Day has been approved for public release by the funding organization in advance. An electronic copy of all material to be presented must be provided to the DARPA Program Manager for review by October 19, 2022, at 5 p.m. ET. There will be no exceptions to this requirement. DARPA will not sponsor any attendee information presented at Proposers Day on the Agency website.

During the event, there will be opportunities for teams to conduct breakout sessions in order to exchange information and maximize collaboration and teaming. Availability of breakout rooms will be on a first-come, first-served basis at the event.

DARPA hosts Proposers Days to promote teaming arrangements between researchers; provide potential performers with information on whether and how they might respond to the Government's research and development solicitations; and to increase efficiency in proposal preparation and evaluation. Therefore, Proposers Days are open only to registered potential proposers and their collaborators. To maximize the pool of innovative proposal concepts, DARPA strongly encourages participation in these events and subsequent solicitations by non-traditional performers, including small businesses, academic and research institutions, and first-time Government contractors.

A list of registrant contact information will be made available to attendees following the Proposers Day to facilitate interchange among interested proposers. **If you would NOT like to be included on this list, please notify us when registering.**

Attendance at the POWER Proposers Day is voluntary and is not required to propose to subsequent BAAs on this topic. The Proposers Day does not constitute a formal solicitation for proposals or abstracts. This announcement is issued solely for information and program planning purposes and is not a Request for Information (RFI). Since this is not an RFI, no submissions against this notice will be accepted by the Government. DARPA will not provide reimbursement for costs incurred to participate in this Proposers Day.

The Program Manager for this effort is:

Col Paul Calhoun

DARPA/TTO

DARPA-SN-23-03@darpa.mil