Special Notice (SN) DARPA-SN-24-30
Expeditionary Carbon Utilization for Energy Resilience and Stabilization (ExCURSion)
Proposers Day
March 1, 2024

The Defense Advanced Research Projects Agency (DARPA) Defense Sciences Office (DSO) is sponsoring a Proposers Day to provide information to potential proposers on the objectives of an anticipated Broad Agency Announcement (BAA) for the Expeditionary Carbon Utilization for Energy Resilience and Stabilization (ExCURSion) program. The Proposers Day will be held on March 1, 2024, from 11:00 a.m. to 4:50 p.m. (Eastern Time) in Arlington, VA. The event will be webcast for those who would like to participate remotely. Advance registration is required for attending the Proposers Day in person and viewing the webcast. Note that all times listed in this announcement and on the registration website are Eastern Time.

The goals of the ExCURSion Proposers Day are to: (1) introduce the research community (industry, academia, and Government) to the ExCURSion program vision and goals; (2) explain the mechanics of a DARPA program and the milestones of this particular effort; and (3) encourage and promote teaming arrangements among potential organizations that have the relevant expertise, facilities, and capabilities for executing a research and development program responsive to the ExCURSion program goals.

DARPA anticipates releasing the ExCURSion BAA in March 2024. If released, the BAA will be available on https://sam.gov/ and http://www.grants.gov/. Following Proposers Day, DARPA may post the presented materials and the list of Frequently Asked Questions (FAQ) to the DARPA/DSO Opportunities website.

To maximize the pool of innovative proposal concepts, DARPA strongly encourages participation by non-traditional proposers (including small businesses, academic and research institutions, and first-time government contractors) in events such as this and any subsequent solicitation.

PROGRAM OBJECTIVE AND DESCRIPTION

Current technologies for portable energy storage and use by expeditionary forces are dominated by batteries and traditional fossil fuels. Batteries can in principle be electrically recharged from any voltage source, a feature that makes them extremely operationally flexible. However, existing rechargeable electric power sources suffer from low energy density (generally <1 kWh/L), making them infeasible for carrying out a broad class of expeditionary missions requiring strict size, weight, and power characteristics. Hydrocarbon-based fossil fuels have much higher energy density (>5 kWh/L). However, fossil fuels require regular resupply, a costly, and often dangerous operation.

The ability to generate fuel from local sources of CO_2 and energy would combine the high energy density of fossil fuels with the energy-source-agnostic advantage of electric systems to revolutionize expeditionary energy logistics. Combining CO_2 capture and storage with CO_2 reduction to energy-storing fuel species, would enable a completely closed system that can capture its own combustion stream and recharge its fuel content upon energy input. Such a system could take advantage of the high energy density of traditional fossil fuels and the operational flexibility of an electric battery system.

The ExCURSion program seeks innovative research in foundational technologies to enable

carbon dioxide (CO_2) reduction, capture, and storage. These technologies are envisioned as key components for a future self-enclosed system that creates liquid carbon fuels and uses them to store and deploy energy to address the need for energy resilience in an expeditionary setting, independent of a fuel supply line. The envisioned system will enable safe, field-deployable, high-density, and rechargeable energy storage.

TEAMING

DARPA highly encourages teaming before proposal submission and will facilitate the formation of teams with the necessary expertise. Potential proposers may choose to participate in either, none, or both of the following options:

1. Attendee List (limited distribution): Participant contact information (name, organization, email address) will be distributed to all other ExCURSion Proposers Day attendees. The registration website will ask registrants to indicate whether they approve publication of their contact information.
2. Proposer Profile List (limited distribution): Interested parties will submit a one-page profile consisting of their contact information (name, organization, email, telephone number, mailing address, and, if applicable, organization website), a brief description of their technical competencies, and, if applicable, their desired expertise from other teams/organizations. All profiles must be emailed to ExCURSion@darpa.mil no later than 12:00 p.m. on March 4, 2024. Following the deadline, the consolidated teaming profiles will be sent via email to the proposers who submitted a valid profile. Specific content, communications, networking, and team formation are the sole responsibility of the participants. Neither DARPA nor the Department of Defense (DoD) endorses the information and organizations contained in the consolidated teaming profile document, nor does DARPA or DoD exercise any responsibility for improper dissemination of the teaming profiles.

LIGHTNING TALKS

Attendees may be afforded the opportunity to give a Lightning Talk (a brief, 3-minute oral presentation) during the Proposers Day outlining their interests and capabilities. The purpose of these presentations is to facilitate teaming discussions among the attendees. Upon registering, attendees may indicate if they would like to give a Lightning Talk. Due to limited availability, DARPA will accept submissions on a first-come, first-served basis and does not guarantee that an attendee's requests to brief will be fulfilled. Submitted briefing materials are limited to a single, PDF-format slide, which should be appropriate for public release, as they will be shared with the session via webcast. The slide must be submitted to ExCURSion@darpa.mil by 11:00 a.m. on February 27, 2024. DARPA will contact submitters upon receipt of their slide with additional guidance for the Proposers Day.

REGISTRATION INFORMATION

The ExCURSion Proposers Day will be held on March 1, 2024, from 11:00 a.m. to 4:50 p.m. in Arlington, VA. There is no registration fee for the Proposers Day meeting or webcast.

Registration opens: As of publication of this announcement.

Registration website: https://events.sa-meetings.com/excursionproposersday

Registration closes: February 27, 2024, at 4:00 p.m. or when capacity is reached, whichever comes first.

Advance registration via the above website is required in order to receive access to the webcast and is mandatory for every individual intending to view the webcast alone or as part of a group.

Registrants in excess of the maximum capacity limitations (350 individuals) may be added to a waitlist. Individuals who are unable to register because the deadline has passed may request to be added to the waitlist. If slots become available due to cancellations, the slots may be filled on a first come, first served basis from the waitlist.

ELIGIBILITY

DARPA hosts Proposers Days to: (1) promote teaming arrangements between researchers; (2) provide potential proposers with information on whether and how they might respond to the Government's research and development solicitations; and (3) increase efficiency in proposal preparation and evaluation. Therefore, Proposers Days are only open to registered potential proposers, i.e., the events are closed to the general public and media. For this particular program, Proposers Day registration is open to potential proposers who are U.S. citizens, U.S. permanent residents, and foreign nationals.

All registrants who are not U.S. citizens must complete and submit either a DARPA Form 60 (U.S. Permanent Resident and Foreign National Visit Request – e.g., industry or academia) or an Official Visit Request (foreign government personnel, only) through their country's embassy based in Washington, DC, no later than 4:00 p.m. on February 27, 2024. Form 60 submission instructions are provided on the registration website and in the registration confirmation email. Contact your embassy staff for assistance in submitting the Official Visit Request.

Q & A

Administrative, technical, and contractual questions about the ExCURSion program should be emailed to ExCURSion@darpa.mil. All questions must be in English and must include the name and email address of a point of contact. Following Proposers Day, DARPA may post an FAQ list on the DARPA/DSO Opportunities website.

CONTACT INFORMATION

Please refer to the ExCURSion Proposers Day in all correspondence.

- Technical Point of Contact: Keith Whitener, Program Manager, ExCURSion@darpa.mil
- Registration Website: https://events.sa-meetings.com/excursionproposersday
- DARPA/DSO Opportunities Website: https://www.darpa.mil/work-with-us/opportunities

DISCLAIMERS AND IMPORTANT NOTES

Viewing the ExCURSion Proposers Day is voluntary and is not required to propose to the anticipated ExCURSion BAA. Interested parties to this notice are cautioned that nothing herein obligates the Government to issue a solicitation. 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, the Government will not accept submissions against this notice, with the exception of the one-page profile referenced in the Teaming section above and briefing

materials associated with Lightning Talks. No classified, International Traffic in Arms Regulations (ITAR) or Export Administration Regulations (EAR) controlled, or proprietary information shall be presented by the Government at Proposers Day. Inclusion of proprietary information during Lightning Talks is at the presenter's discretion; however, any submitted Lightning Talk presentation slides should be appropriate for public release. DARPA will not provide reimbursement for costs incurred to participate in this Proposers Day. Recording the Proposers Day is not permitted.