FY 2022 DOD: Topic D6 **January 7, 2021**

Environmental Security Technology Certification Program (ESTCP)

EFFECTIVE PLANNING FOR ELECTRIC VEHICLE INFRASTRUCTURE AND MANAGEMENT

OBJECTIVE

The Department of Defense (DoD) Installation Energy Test Bed seeks studies and demonstration projects that inform cost-efficient infrastructure investments and/or address barriers to the adoption of electric non-tactical vehicles (NTV) and mission support equipment (forklifts, tugs, flightline power units, etc.).

Proposals for Studies. Proposers are encouraged to partner with subject matter experts from within the government, academia and/or the private sector. The findings and recommendations of these studies are intended to inform installation Master Plans and should be coordinated with ongoing Master Planning efforts to the degree possible. Studies should leverage and cite recent analyses and reports related to this topic. The following aspects of electric NTV fleet management and infrastructure planning are of particular interest:

- Outlook and timeline for electrification of NTV fleet and mission support equipment.
- Impact of vehicle and mission support equipment electrification on installation-wide electrical demand.
- Impact of future developments in electric vehicle (EV) and electric vehicle support equipment (EVSE) technology (such as wireless chargers, ultra-fast chargers, mobile charging, new battery technology, etc.) on infrastructure planning and strategies to minimize technology transition costs.
- Demand management strategies to minimize utility and infrastructure costs.
- Use of bi-directional chargers for installation grid support or building-level energy resilience.
- Strategies for leveraging current infrastructure upgrades to include additional capacity or "make-ready" designs to accommodate future EVSE infrastructure.

For the purposes of estimating the level of effort, proposers should plan to begin work in February-April 2022 and be completed by March 2023.

The pre-proposals shall follow the general instructions provided on the ESTCP website with the following modifications to Section 2.2 Pre-Proposal Content:

- Subsections 1-6, 8, 9, 11 are unchanged.
- Subsection 7, Technology Description, sub-subsection (a) is unchanged, sub-subsection (b) should provide a description of the main elements of the proposed study and how it will inform DoD infrastructure planning. Sub-subsections (c), (e) and (f) are not applicable. Sub-subsection (d), Technical Approach, should describe proposers' approach to performing the necessary analysis to support the study findings and

recommendations. Sources of existing related work should be identified with explanation of how this study will build upon past work.

- Subsection 10, Technology Transition: Not Applicable.
- Subsection 12, Funding: Project costs should be estimated to complete the analysis and reporting within the prescribed timeline, however proposers may include analysis for more than one installation.

Proposals for Technology Demonstrations. Demonstration projects should address barriers to the adoption of electric NTV and mission support equipment. ESTCP funding should not be used to purchase electric vehicles.

Note: Proposals that include demonstration of technologies that will require an Authority to Operate (ATO), if requested to submit a Full Proposal, will be asked to obtain a letter of support from the appropriate cybersecurity authorizing official, or their representative, indicating a viable pathway to obtaining approval to perform the demonstration or a full ATO.

POINT OF CONTACT

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For pre-proposal submission due dates, instructions, and additional solicitation information, visit the ESTCP website.