



DoD Establishes Public-Private Partnership to Bolster Defense Electronics Sector

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The Department of Defense's Office of Industrial Policy (IndPol), through its Industrial Base Analysis and Sustainment (IBAS) Program, has advanced the U.S. Partnership for Assured Electronics (USPAE) into the first of six planned option years under its seven-year Lead-free Electronics prototype project. Funded through the "Cornerstone" Other Transaction Authority (OTA), this \$8.95 million award enables USPAE to strengthen the economic and force posture of the electronics sector across the U.S. defense industrial base (DIB) by establishing a public-private partnership framework between the U.S. Government and USPAE to form the new Defense Electronics Consortium (DEC).

To demonstrate the practical management and initial operating capability of the DEC, USPAE was awarded \$3.9 million in January 2021 to plan and execute a "pilot" prototype project to accelerate the transition to lead-free electronics in aerospace, defense, and other high-performance electronics. The project team includes four of the country's leading universities in this field (Auburn University [AL], Binghamton University [NY], the University of Maryland [MD], and Purdue University [IN]). Industry participants range from large defense companies to small non-traditional DoD suppliers, and highly respected subject matter experts.

DEC provides outreach, recruiting of members, membership management, and project management to ensure the Lead-free project meets cost, schedule, and performance goals. The Lead-free project provides solder-agnostic characterization and analysis methods for qualifying solderable alloys, as well as evidence for solder joint, component, and board-level reliability. As part of this project, DEC will also evaluate industrial base issues, including, but not limited to: product safety, security, quality, provenance, reliability and resiliency; technology development and transition; standards development and implementation; supply chain analysis and issues mitigation; low-rate production of specific products; and workforce training and

certification. Accelerating the transition to lead-free solders in defense systems will help reduce supply chain risks, improve responsiveness, and better incorporate the latest electronics innovations.

The IBAS Director, Ms. Adele Ratcliff, stated, “The Lead-free project’s framework for evaluating solder alloys ensures reliability for defense uses and aligns DoD’s electronics manufacturing processes with those used in the commercial electronics industry. DEC’s creation is a clear signal by the Department to our partners in industry and academia of the importance of collaboration and shared effort to protect and strengthen the critical supply chains that support our national security. I’m confident DEC’s management team of USPAE and Advanced Technology International (ATI) will provide the vision necessary for U.S. electronics supply chains to coalesce around initiatives that will re-invigorate this important sector of the U.S. economy.”

Electronics offers DoD much of its asymmetrical warfare advantage and is a high priority. Success requires a dynamic electronics industrial base with capabilities ranging from manufacturing printed circuit boards, semiconductors, and other components to the packaging and assembly of it all.

“DEC is positioned to give DoD direct access to industry and academia to gain insights, collaborate on electronics innovations, work to solve government challenges, advance the workforce, and accelerate the adoption of new technologies.” said Mr. Chris Peters, Executive Director of USPAE and DEC.

Through DEC, USPAE will give the DoD and other government agencies access to small- and medium-sized innovators that do not typically do business with the Federal Government. The DEC membership includes electronics innovators (traditional and non-traditional), academia, and non-profit/not-for-profit institutions. ATI serves as the DEC consortium management firm.

The Deputy Assistant Secretary of Defense for Industrial Policy, Mr. Jesse Salazar, stated “The past two to three decades have seen the decline of U.S. dominance across all facets of electronics manufacturing. We are committed to giving our full support to USPAE and ATI to ensure DoD is back on the cutting edge of the electronics sector to reduce our dependence on foreign sources for electronics in our defense systems.”

For additional information on this and other IBAS projects, please email the IBAS team at osd.pentagon.ousd-a-s.mbx.ibas@mail.mil.