ADVANCED, ENERGY EFFICIENT SHELTER SYSTEMS (AEESS) FOR CONTINGENCY BASING PROJECT BREIFED AT THE JOINT COMMITTEE ON TACTICAL SHELTERS (JOCOTAS) SPRING MEETING. AEESS is a Joint Service, multi-organizational program to address inefficiencies with energy usage and fuel consumption of shelter systems. Key players include the Army, Air Force and Navy with responsibilities for requirements, doctrine, science and technology, engineering development, test and evaluation and systems integration. The four year OSD funded effort was initiated in FY12. Worldwide evaluations took place in tropical (Anderson AFB, Guam), desert (Ali Al Salem, Kuwait), and arctic (Army Cold Regions Test Center, Ft Greely AK) conditions. The evaluation consisted of three phases. During the initial demonstration complete, state-of-the-art shelter systems in operational environments were assessed. During the Technology Development Phase promising concepts are further matured to reduce fuel consumption. Follow on Demonstrations inculcate lessons learned to optimize shelters system performance at the tactical edge of the battlefield. The goal payoff is a 50% reduction in power consumption. Twenty four shelters were assessed during the project. Some were used as benchmarks and others evaluated new liner and insulating technologies. New heaters were also included in the assessment. The results on the shelters documented a 12% improvement over prior state of the art, energy efficient shelter systems utilized in the initial demonstration phase. When the new heaters were added in on the cold weather trials an additional 27% fuel reduction was measured.

Aerial View of AF Shelters in Kuwait

Heater and Shelter Testing in Alaska

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