KEYNOTE ADDRESS
NET ZERO ENERGY INSTALLATIONS OVERVIEW

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An overview of the DoD-DOE Initiative Net Zero Energy Installation (NZEI) activity is presented. The Office of the Secretary of Defense (OSD) and the DOE Federal Energy Management Program (FEMP) lead the activity working with the Services. The NZEI activity objective is to develop a template for implementing NZEI through pilot NZEI projects with each of the Services.

A NZEI is a military installation that produces as much energy on or near the installation as it consumes in its buildings and facilities. During this presentation, the fundamental approach to achieving a NZEI is defined and the manner in which the DoD is applying the NZEI definition is discussed. The elements of a NZEI include: improved efficiency in existing buildings; reduced energy needs in new buildings; on-site renewable energy generation resources; addressing energy security needs; and implementation of an efficient fleet and renewable fuel infrastructure.

Approaches for how the NZEI elements are being implemented, as well as the use of the Renewable Energy Optimization (REO) “tool” to pre-screen and prioritize renewable energy options are presented. How private sector financing is leveraged to support energy use reduction and renewable energy projects is provided. The development and control and operation of a facility micro grid in support of “islanding” and load management are also discussed. Finally, the DoD-DOE Initiative initial NZEI pilot project at MCAS Miramar is introduced.