

# SUPERIMPOSED MILITARY ENERGY STORAGE



Can long-duration energy storage (LDEs) meet the DoD's 14-day requirement? This report provides a quantitative techno-economic analysis of a long-duration energy storage (LDES) technology, when coupled to on-base solar photovoltaics (PV), to meet the U.S. Department of Defense's (DoD's) 14-day requirement to sustain critical electric loads during a power outage and significantly reduce an installation's carbon footprint.



How will energy storage impact resiliency? In addition, the large energy storage expected to be required to meet DoD resiliency goals will result in a BESS that has no need to use most of its SOC while grid tied to yield economic value. A higher minimum SOC will lead to a higher survival probability at 14 days, and a lower SOC minimum will lead to



How much energy does the DOD use? Energy is essential for DoD's installations, and DoD is dependent on electricity and natural gas to power their installations. In fiscal year 2022 (20), DoD's installations consumed more than 200,000 million Btu (MMBtu) and spent \$3.96 billion to power, heat, and cool buildings.



Should military installations use Antora energy's LDEs battery? It yields an NPV that is more than \$20 million higher than the electric-energy-only case. This allows the optimized system to use a larger solar PV and does not compromise the electric energy resiliency. This study assessed the potential value for military installations of a future commercial version of Antora Energy's LDES battery.



Where can I find a report on long-duration energy storage? This report is available at no cost from the National Renewable Energy Laboratory (NREL) at Marquette, Jeffrey, Dan Olis, Xiangkun Li, and Tucker Oddleifson. 2023. Long-Duration Energy Storage: Resiliency for Military Installations. Golden, CO: National Renewable Energy Laboratory.

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Is Antora energy's battery energy storage system ready for deployment? The LDES modeled is Antora Energy's battery energy storage system (BESS). It is currently at a technology readiness level (TRL) of 7 and not ready for full-scale deployment. To support decisions on the value of near-term demonstrations, this analysis looked at the potential value of Antora Energy's BESS if deployed in the future.



MORE Advanced military energy storage equipment has become an indispensable part of modern high-tech wars. At present, various forms of energy storage technology are rapidly innovated.



Enhanced Energy Storage and Intelligent Power Management Systems for Defense Department Tactical Microgrids. Despite these improvements, military-grade generators cannot fully capture the energy.



The US Department of Defense has awarded GM Defense a contract to prototype an energy storage unit for the Defense Innovation Unit (DIU). The agreement supports the DIU's Stable Tactical Expeditionary.

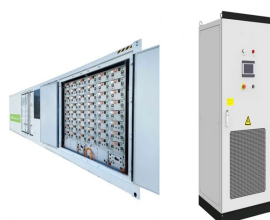


The system will be 1MW/10MWh, enabling 10-hours discharge of stored energy at 1MW output. Lockheed Martin said yesterday that the battery system will be tested over a period of about two years in line with protocols.

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As shown in Fig. 12 (h), the high-field capacitive energy storage properties of c-BCB/BNNS is up to 400 MV/m with a discharged energy density of 1.8 J/cm<sup>3</sup> at 250 °C,



Advantages and development trends of battery energy storage systems in the military field. 1.Improved concealment and anti-destruction. Silent power supply: The operating noise of the energy storage system is less than ???



With plans to bring Kratos to market by 2024, Solus Power is poised to reshape the future of military energy storage and distribution. This technology promises to empower militaries worldwide to achieve their ???



Electrical energy is a basic necessity for most activities in the daily life, especially for military operations. This dependency on energy is part of a national security context, especially for a ???



Battery energy storage technology is gradually becoming an important support for the military energy system with its flexible deployment, rapid response and clean characteristics. Soalr energy storage system can achieve ???