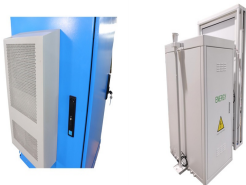


# DOMESTIC MILITARY ENERGY STORAGE

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What is the energy storage systems campus? The energy storage systems campus will leverage and stimulate over \$200 million in private capital, to accomplish three complementary objectives: optimizing current lithium ion-based battery performance, accelerating development and production of next generation batteries, and ensuring the availability of raw materials needed for these batteries.



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.



What is long-duration energy storage (LDEs)? The Advanced Research Projects Agency-Energy (ARPA-E), through its Duration Addition to electricity Storage (DAYS) program (2), has invested in long-duration energy storage (LDES) systems with a focus on meeting the future needs of the grid. One such technology, developed by Antora Energy (3), stores thermal energy in carbon blocks.

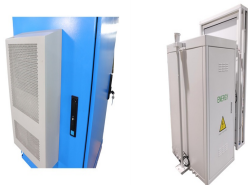


How much electricity does a military installation use? Typical mid-size to large active military installations' peak electric loads range from 10 to 90 MW, and their critical electric loads range from approximately 15% to 35% of the total electric load. Figure 6 illustrates conditions seen on seven different mid-size to large military installations. Figure 6.



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.

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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 Marqusee,Jeffrey,Dan Olis,Xiangkun Li,and Tucker Oddleifson. 2023. Long-Duration Energy Storage: Resiliency for Military Installations. Golden,CO: National Renewable Energy Laboratory.



This effort, called the Arctic Grid Energy Solutions (AGES) project, will increase DoD's demand signal for commercial cold region batteries, reduce barriers for the commercial sector to work with the DoD, and pave the way for ???



That project incorporates a 1.5 MW wind turbine, a 1.6 MW diesel backup generator, and a 1.2 MWh battery energy storage system. The Otis microgrid was the first military microgrid to use a battery energy storage ???



PNNL teamed up with multiple agencies to install a battery energy storage system at a South Dakota Air Force base. For military bases, access to secure and reliable energy is mission critical. (NRECA) to enhance energy ???



Flexible, scalable design for efficient energy storage. Energy storage is critical to decarbonizing the power system and reducing greenhouse gas emissions. It's also essential to build resilient, reliable, and affordable ???



MOUNTAIN VIEW, CA (April 21, 2023)??? Across the Defense Innovation Unit, we are facilitating a number of projects and solutions focused on increasing energy efficiency, reducing costs across more than 560,000 DoD ???

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Through the EDSI project, DoD is adding resilience by building up storage from grid-supplied power to keep installation lights on as well as using installation energy in off-peak periods to power up a BESS system that can be ???



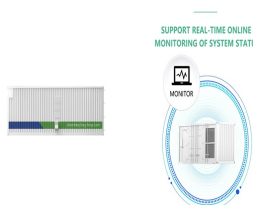
Electrical energy is a basic necessity for most activities in the daily life, especially for military operations. This dependency on energy is part of a national security context, especially for a ???



The U.S. military's energy security and operational readiness depend on a stable and secure supply chain for critical technologies, including energy storage systems. Lithium-ion batteries rely on materials like lithium, cobalt, and nickel, ???



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 ???

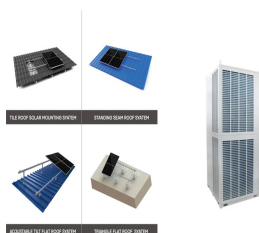


Even though the United States has focused on domestic sourcing of energy, as long as the U.S. military relies upon fossil fuels to power its bases, any disruption to global fossil fuel supplies will drive up costs and divert ???

# DOMESTIC MILITARY ENERGY STORAGE



Thermal stores are highly insulated water tanks that can store heat as hot water for several hours. They usually serve two or more functions: Provide hot water, just like a hot water cylinder. Store heat from a solar thermal ???



MOUNTAIN VIEW, CA (October 3, 2023) ??? Decentralized energy resiliency empowers the Department of Defense (DoD) to sustain a wide range of operations???from humanitarian or natural disaster assistance to countering ???



The mission of the Military Power Sources Consortium is to provide a forum for its members to share information and develop a collective voice on issues related to preserving and enhancing the domestic design, development and ???



Given the rapidly increasing demand for electricity, we support more domestic manufacturing to help expand energy resources in the United States and accelerate the energy transition," Duke Energy's Kaitlin Kirshner ???