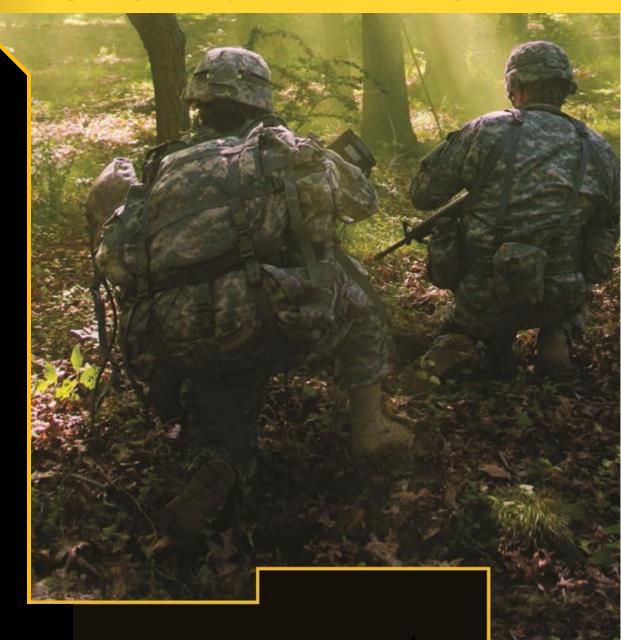


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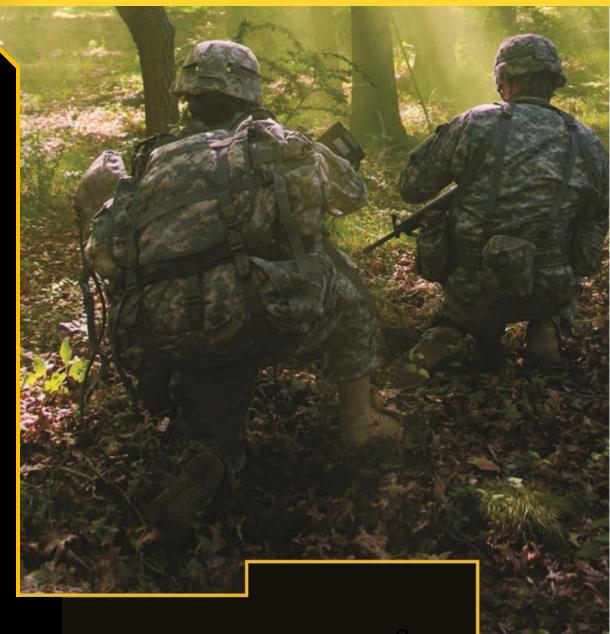






#### Honorable Katherine Hammack

Assistant Secretary of the Army for Installations, Energy and Environment





### Enabling Victory in a Complex World

- The environment the Army will operate in is unknown, and constantly changing
- The enemy is unknown
- The location is unknown
- The coalitions involved are unknown

#### Resilient Army Installations

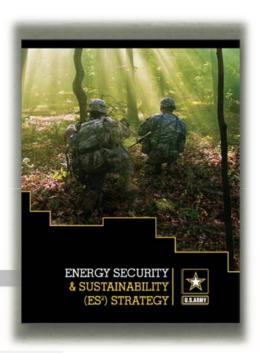
- Maintain continuity of operation to ensure we are ready – trained, equipped, sustained, motivated
- Secure resources through a diversity of options – energy, water, land
- Resilient capabilities to adapt to uncertain, changing conditions such as climate change

Army forces must provide the Joint Force with multiple options, integrate the efforts of multiple partners, operate across multiple domains, and present our enemies and adversaries with multiple dilemmas

Army Operating Concept



#### Energy Security and Sustainability Strategy



- ES<sup>2</sup> Published in June 2015
- Roadmap to future energy security and sustainability
- Foster more adaptable and resilient force
- Prepare for a future defined by complexity, uncertainty and rapid change
- Expands on and replaces the 2009 Army Energy Security Implementation Strategy

#### "This strategy represents a turning point."

Under Secretary of the Army, Brad R. Carson, and Army Vice Chief of Staff, Gen. Daniel B. Allyn



#### The ES<sup>2</sup> Strategy identifies five strategic goals



- Inform Decisions
- Optimize Use
- Assure Access
- Build Resiliency
- Drive innovation

*Energy Resiliency* is the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from service disruptions.





Lieutenant General David D. Halverson Assistant Chief of Staff for Installation Management





Jud Virden, Jr., Ph.D. Associate Laboratory Director, Energy and Environment Directorate, Pacific Northwest National Laboratory (PNNL)



Maureen Ehrenberg Executive Managing Director, Integrated Facilities Management, Americas



Climate Change: Progress and Impacts on Installation Resiliency

> Kate White, Ph.D., PE Senior Lead for Global and Climate Change, USACE Institute for Water Resources







Lieutenant General David D. Halverson Assistant Chief of Staff for Installation Management

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#### Lieutenant General Dave Halverson

Assistant Chief of Staff for Installation Management

# **Resilient Army Installations**