Army Energy Resilience

Energy Planning for Resilient Military Installations
Tuesday 5 December 2017

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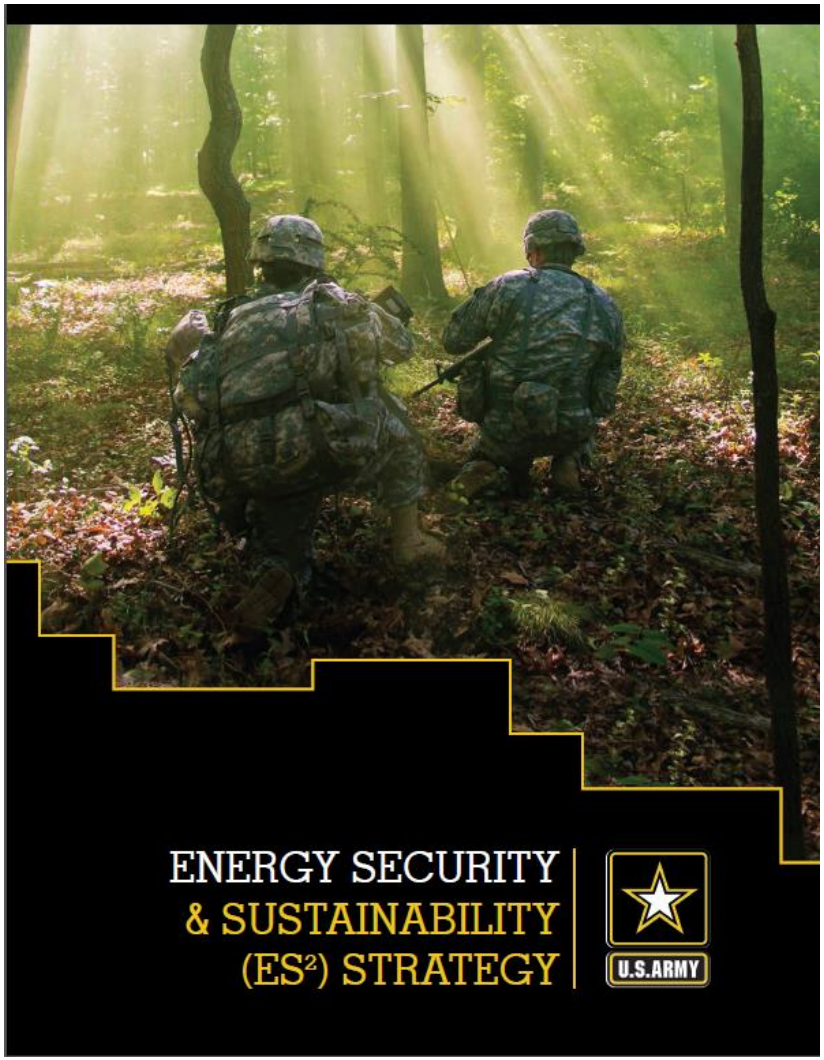
Installation Support to Readiness

"Soldier readiness starts at home, on top-quality Army installations"
- Chief of Staff of the Army Gen. Mark A. Milley

- Installations are the backbone of the Army as we deploy ground forces, prevent conflict and, shape outcomes
- Our fixed installations still face significant infrastructure risk and increasing threats
- The Army's approach to addressing these risks has evolved from a focus on meeting mandates to a focus on mission requirements

Energy Security and Sustainability (ES2) Strategy



Inform Decisions

Optimize Use

Assure Access

Build Resiliency

Drive Innovation

E&W Security Policy, Measurement and Strategy

ARMY GOAL

Strategic investments with clear mission benefits

ISR-MC Metrics Reported through ASRA and SESC

- Strategic Readiness Platforms
- Develop Funding Options (Appropriated and Third Party Funding)
- Management Solutions

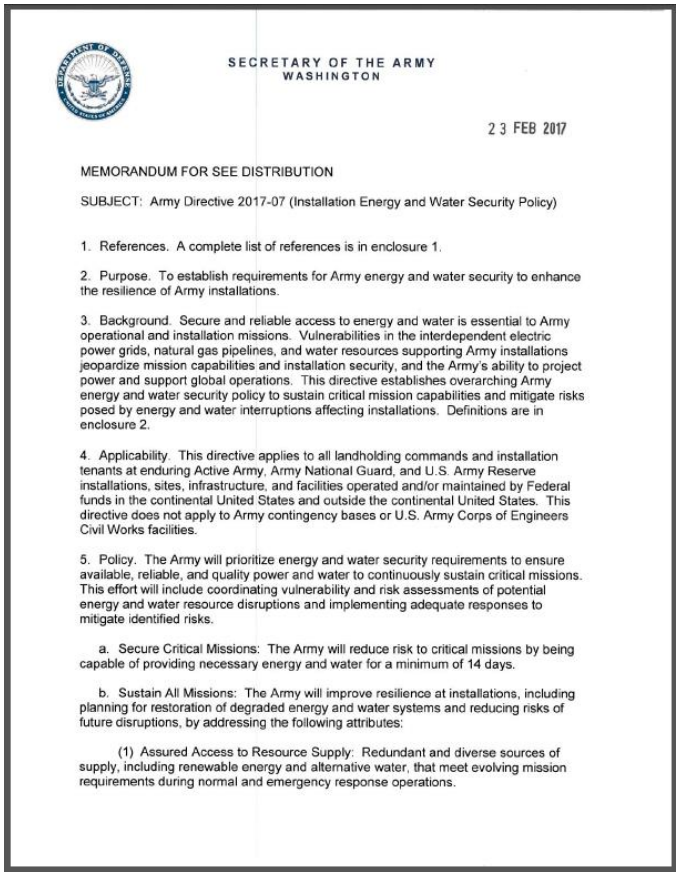
Installation Energy and Water Security Directive

E&W Security Requirements

SECARMY Directive 2017-07: Installation Energy and Water Security Policy

(signed by SECARMY, 23 February 2017)

- Supports the Army's ability to project power and support global operations
- Sets a requirement to **secure critical missions** by providing necessary energy and water for a minimum of 14 days
- Sets a requirement for **sustainment of all installation missions** by
  - Assuring access to resource supply
  - Improving infrastructure condition
  - Promoting robust system operations



SECRETARY OF THE ARMY
WASHINGTON

23 FEB 2017

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Army Directive 2017-07 (Installation Energy and Water Security Policy)

1. References. A complete list of references is in enclosure 1.

2. Purpose. To establish requirements for Army energy and water security to enhance the resilience of Army installations.

3. Background. Secure and reliable access to energy and water is essential to Army operational and installation missions. Vulnerabilities in the interdependent electric power grids, natural gas pipelines, and water resources supporting Army installations jeopardize mission capabilities and installation security, and the Army's ability to project power and support global operations. This directive establishes overarching Army energy and water security policy to sustain critical mission capabilities and mitigate risks posed by energy and water interruptions affecting installations. Definitions are in enclosure 2.

4. Applicability. This directive applies to all landholding commands and installation tenants at enduring Active Army, Army National Guard, and U.S. Army Reserve installations, sites, infrastructure, and facilities operated and/or maintained by Federal funds in the continental United States and outside the continental United States. This directive does not apply to Army contingency bases or U.S. Army Corps of Engineers Civil Works facilities.

5. Policy. The Army will prioritize energy and water security requirements to ensure available, reliable, and quality power and water to continuously sustain critical missions. This effort will include coordinating vulnerability and risk assessments of potential energy and water resource disruptions and implementing adequate responses to mitigate identified risks.

a. Secure Critical Missions: The Army will reduce risk to critical missions by being capable of providing necessary energy and water for a minimum of 14 days.

b. Sustain All Missions: The Army will improve resilience at installations, including planning for restoration of degraded energy and water systems and reducing risks of future disruptions, by addressing the following attributes:

(1) Assured Access to Resource Supply: Redundant and diverse sources of supply, including renewable energy and alternative water, that meet evolving mission requirements during normal and emergency response operations.

Measuring Installation Energy and Water Security

Installation Status Report – Mission Capacity (ISR-MC) approved by VCSA and USA (through the Senior Energy and Sustainability Council) to support energy and water security requirements

(approved by VCSA and USA, October 2016)

Installation-level assessment of Energy and Water Security Attributes:

- **CRITICAL MISSION SUSTAINMENT:** Critical mission continuity of operations for 14 days
- **ASSURED ACCESS**: Dependable supply of energy and water needed to meet evolving mission requirements during normal and emergency response operations.
- **INFRASTRUCTURE CONDITION:** Infrastructure capable of on-site storage and flexible and redundant distribution networks to reliably meet mission requirements.
- **SYSTEM OPERATION:** Trained personnel conduct required energy and water security system planning, operations and sustainment activities.

Baseline FY17 ISR-MC Energy and Water Security Results:

Energy Security Summary

	Green	Amber	Red	Black
Critical Mission Sustainment	16%	26%	**46%**	11%
Assured Access	**50%**	**50%**	0%	0%
Infrastructure Condition	18%	**70%**	12%	0%
System Operation	37%	**46%**	16%	1%

Water Security Summary

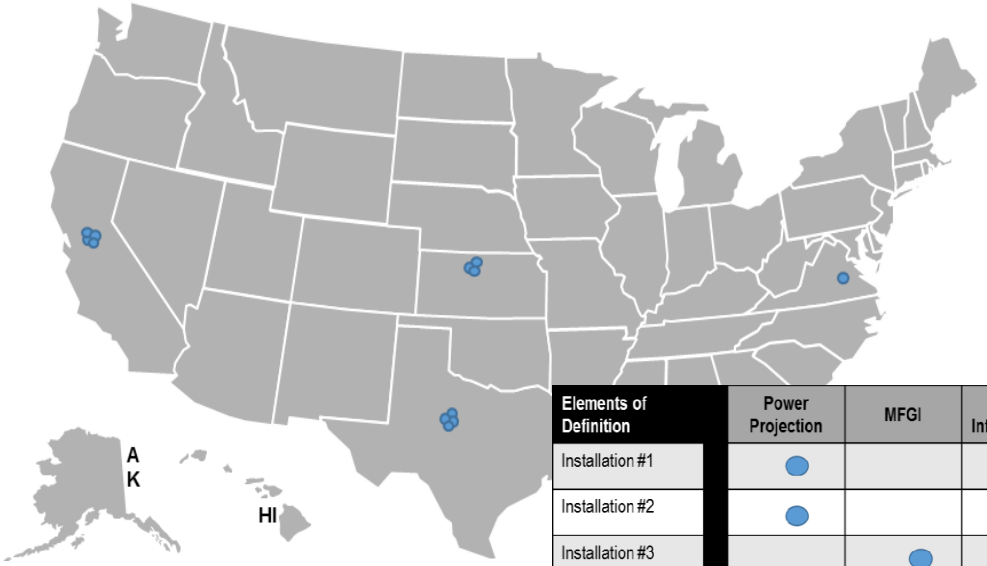
	Green	Amber	Red	Black
Critical Mission Sustainment	17%	15%	**51%**	17%
Assured Access	**88%**	12%	0%	0%
Infrastructure Condition	36%	**61%**	3%	0%
System Operation	45%	**54%**	1%	0%

Strategic Readiness Platforms

Strategic Readiness Platforms (SRPs) provide a way to prioritize investment based on mission requirements

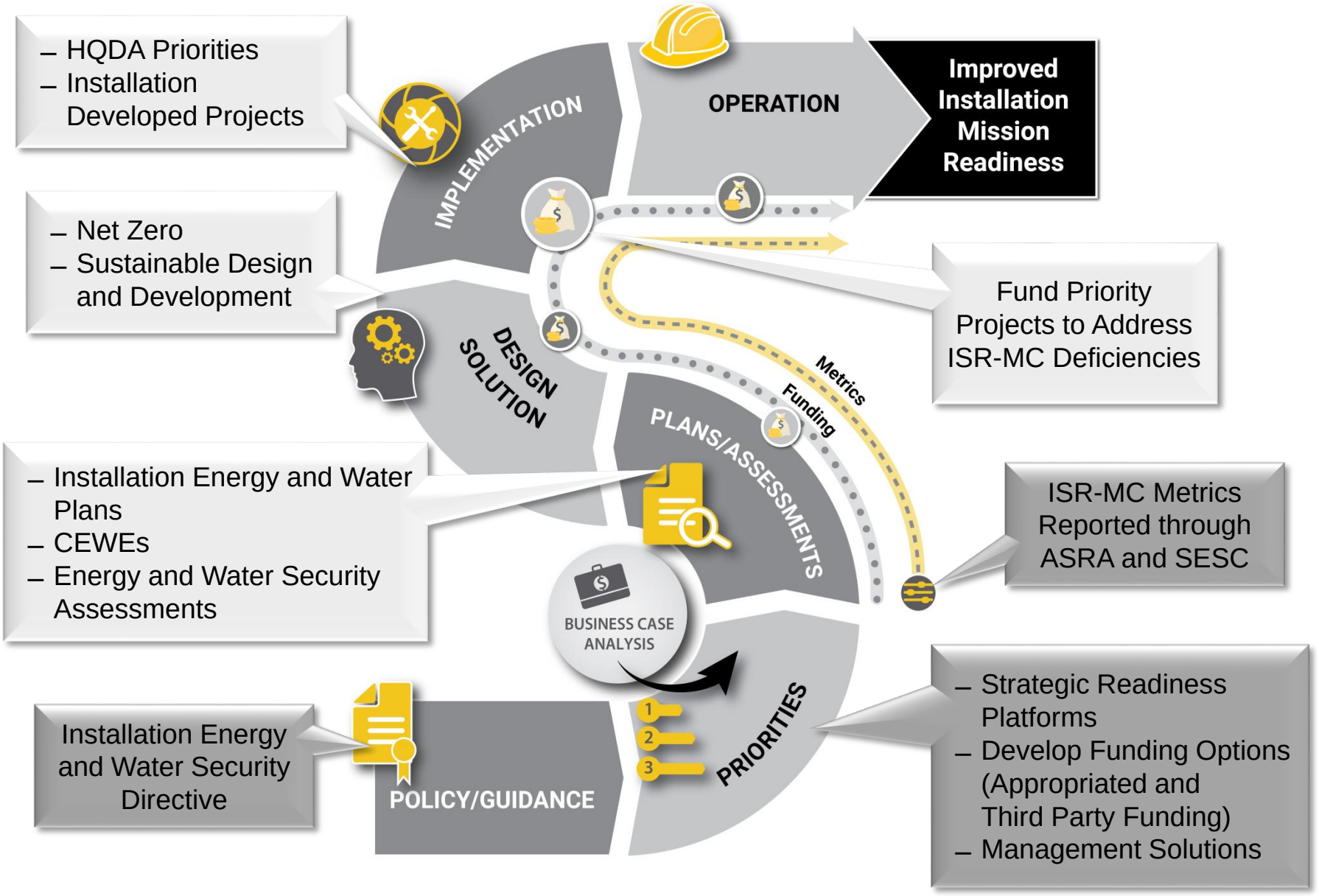
SRP Definition: Installations consisting of power projection capabilities, force mobilization capabilities, and/or critical infrastructure needed to train, mobilize, and deploy forces; project multi-domain capabilities; and provide materiel support for Combatant Command operations plans or contingency requirements to meet the National Military Strategy.

Strategic Readiness Platforms Installation Prioritization



Elements of Definition	Power Projection	MFGI	Critical Infrastructure	Training	Materiel Capability
Installation #1	●			●	
Installation #2	●		●	●	
Installation #3		●			
Installation #4	●		●		●

Resilience Moving Forward



Conclusion