



*Federal Utility Partnership
Working Group Seminar*

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The Current Threat Environment

Acquisition and Sustainment

*"It is now undeniable that the **homeland is no longer a sanctuary**. America is a target, whether from terrorists seeking to attack our citizens; malicious cyber activity against personal, commercial, or government infrastructure ... attacks against our critical defense, government, and economic infrastructure must be anticipated."*

- National Defense Strategy, 2018

*"Since at least March 2016, Russian government cyber actors—hereafter referred to as **"threat actors"**—targeted government entities and multiple U.S. critical infrastructure sectors, including the energy, nuclear, commercial facilities, water, aviation, and critical manufacturing sectors."*

- Alert TA18-074A, FBI/DHS, US Computer Emergency Readiness Team (CERT)



DoD Installation Energy Goals

Acquisition and Sustainment

DoD installations *empower* DoD to defend the homeland and remain the preeminent military in the world

How?

Resilient, secure energy infrastructure supports the NDS Lines of Effort

Rebuild military readiness

- ❑ Implement mission-based priorities and targeted metrics in conjunction with diverse generation sources, technologies and integrated with cybersecurity protections

Strengthen alliances and attract new partners

- ❑ Bolster DoD-internal and EGCC communication to strengthen data gathering and collaboration with industry partners, aligning to resolve challenges

Reforming the Department's business practices

- ❑ Use scenario-based planning, modeling, and quantitative energy assessments to evaluate challenges of complex threats, to mitigate risk, and to verify progress against mission-based metrics

***DoD Installation Energy drives solutions that are:
Prioritized by Mission, Informed by Metrics, and Validated by Results.***



10 U.S.C. Changes

Acquisition and Sustainment

FY17

- Expanded authority of Energy Conservation Investment Program to include ER projects

FY18

- **Section 101(e) Energy Resilience (ER):** ...the ability to avoid, prepare for, minimize, adapt to, and recover from anticipated and unanticipated energy disruptions in order to ensure energy availability and reliability sufficient to provide for mission assurance and readiness, including task critical assets and other mission essential operations related to readiness, and to execute or rapidly reestablish mission essential requirements.
- **Section 101(e) Energy Security (ES):** ...having assured access to reliable supplies of energy and the ability to protect and deliver sufficient energy to meet mission essential requirements.
- **Section 2667 – Lease Authority:** Prioritized Energy Resilience for provision or payment of utility services in lease authority for in-kind consideration
- **Section 2688 – Utilities Privatization:** UP contracts may include ER requirements and metrics; ER performance reporting in the AEMR for UP contracts
- **Section 2911 – Energy:** codifies Energy Resilience in policy to ensure the readiness of the armed forces for their military missions



DoD Installation Energy Priorities

Acquisition and Sustainment

- ❑ Administration mandate: Every DoD energy investment must have a mission benefit
- ❑ Laser focus on Energy Resilience will ensure DoD installations are prepared for and able to quickly recover from energy disruptions that impact mission assurance
 - Comprehensive Installation Energy Plans
 - Focus on priority installations and critical support infrastructure
 - Optimizing use of distributed energy to improve installation energy security and lower costs
- ❑ Optimizing installation energy and water use on DoD installations will reduce high operating costs (currently ~\$3.4B/year) and enhance energy resilience
- ❑ Cyber Securing mission critical Facility Related Control Systems (FRCS) will enhance readiness and mission assurance



DoD Installation Energy Program Tools

Acquisition and Sustainment

Energy Resilience

- Energy Resilience and Conservation Investment Program (ERCIP)
 - ERCIP covers energy/water conservation and now energy resilience

Energy Efficiency

- FSRM (projects with some energy benefit)
 - Mostly energy efficiency projects (e.g., retrofits to install improved lighting, high-efficiency HVAC systems, double-pane windows, energy management control systems, and new roofs)

3rd Party/Alternative Financing

- Energy Savings Performance Contracts (ESPCs) and Utility Energy Savings Contracts (UESCs): contracts include ER, Energy/Water Efficiency, and Cybersecurity of FRCS
- Utilities Privatization – Tool to improve reliability of DoD utility systems. With our policy changes it will require inclusion of energy resilience and cybersecurity requirements
- Enhanced Use Leases – Tool for implementing energy resilience projects
- 10 U.S.C. Section 2922a – Tool to enable onsite generation and power to the installation

Facility Related Control Systems Cybersecurity

- Assessment and mitigation of cyber vulnerabilities in FRCS supporting critical infrastructure
- Program progress varies amongst the Services



DoD Installation Energy Policies

Acquisition and Sustainment

Energy resilience (ER)

- DoD Power Resilience Review (Dec '13 – Aug '14)
- DoDI 4170.11 Installation Energy Management: ER requirements added (Mar '16)
- MIT/LL Energy Resilience Business Case Analysis Study (Oct '16)
- DoD Energy Resilience Operations, Maintenance and Testing Guidance (Mar '17)
- DoD Energy Resilience Planning Guidance (FY '18)
- Alternative Financing Study (RFP issued)

Comprehensive installation energy planning

- DoD policy memo requiring Installation Energy Plans (Mar '16, with update likely April '18)
 - Holistic plan for all energy requirements: ER, Energy Efficiency, Distributed Energy (e.g. RE)
 - Assessing energy actions for direct contribution to mission assurance
 - Includes financing strategy: appropriated and alternative financing requirements
- Demand Response (DR) guidance (March '18)
- ESPC and UESC guidance (FY '18)

Water conservation

- Industrial Agriculture Landscaping Water Guidance (Dec '15)
- Water Use for Landscape Architecture on DoD Installations/Sites (Mar '17)
- UFC for Landscape Architecture (Under development)



Backup



FY 2018 NDAA Energy Resilience Definition

Acquisition and Sustainment

- ❑ **ENERGY RESILIENCE** —The term 'energy resilience' means the ability to avoid, prepare for, minimize, adapt to, and recover from anticipated and unanticipated energy disruptions in order to ensure energy availability and reliability sufficient to provide for mission assurance and readiness, including task critical assets and other mission essential operations related to readiness, and to execute or rapidly reestablish mission essential requirements.

- ❑ **ENERGY SECURITY** —The term 'energy security' means having assured access to reliable supplies of energy and the ability to protect and deliver sufficient energy to meet mission essential requirements.