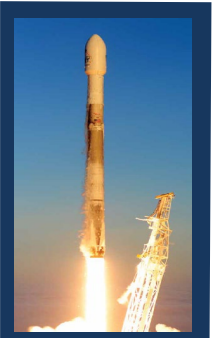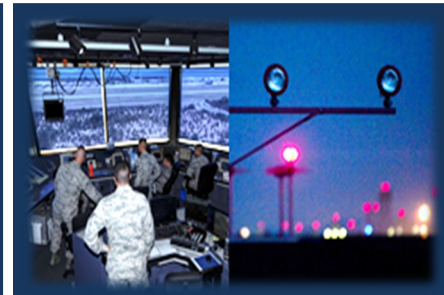# *Federal Utility Partnership Working Group Seminar*

Walter Ludwig
Office of the Assistant Secretary of Defense for Sustainment - Energy
November 7, 2019

# National Defense Strategy (NDS)

- **2018 NDS outlines a stressing security environment**
  - "Every domain is contested – air, land, sea, space, and cyberspace"
  - "Lethal and disruptive battlefield, combined across domains, and conducted at increasing speed and reach"
  - "The homeland is no longer a sanctuary"

- **Future requirements:**
  - Distributed operations, logistics
  - Dispersed, resilient, adaptive basing
  - Ensure sustainment under attack
  - High energy weapons, sensors
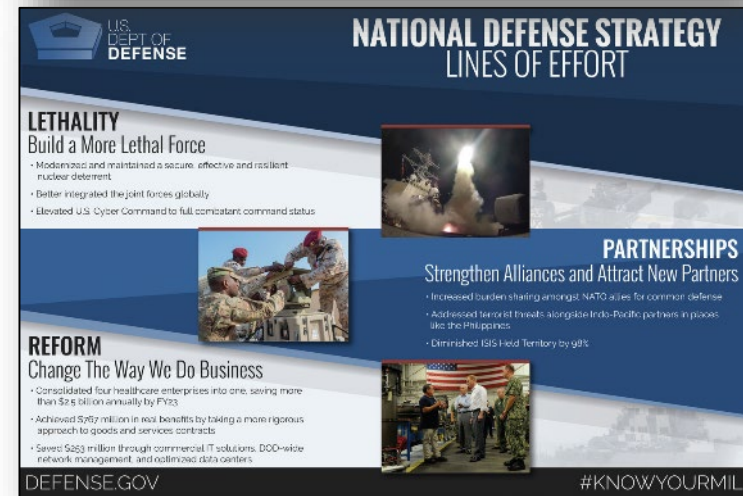
Growing global threats put our military operations at risk.

DoD Energy Priorities

- **Mission**
  - Sustain warfighting readiness and lethality by providing all energy-related policy and governance for programs and activities that enable resilient, efficient, and cyber-secure energy for Joint forces, weapon systems, and installations

- **ASD(Sustainment) priorities aligned to NDS**
  - Prepare the battlefield for 2025
  - Create and sustain resilient installations

- **Four primary focus areas:**
  - Energy Resilience
  - Energy Risk
  - Energy Performance
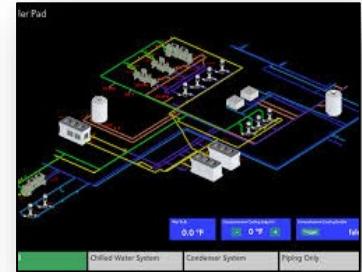 - Cyber Secure Facilities

Vision: DoD has resilient energy needed to deter wars and ensure our Nation's security.

Aligning Policies with Strategy

Sustainment

- ## Installation Energy Plans (IEPs) Policy
  - DoD policy memo requiring IEPs (Mar '16)
  - Supplemental IEP Guidance (May '18)

- ## Energy Resilience (ER)
  - Metrics & Standards for ER at Enduring Locations Memo (Est. Nov '19)
  - DoD Energy Resilience Readiness Exercise (ERRE) Framework Guidance (Est: Nov '19)

- ## Facility Related Control Systems (FRCS)
  - DFARS 252.204-7012 Safeguarding Covered Defense Information and Cyber Incident Reporting
  - DFARS 252.227-7013 Rights in Technical Data - Non-commercial Items
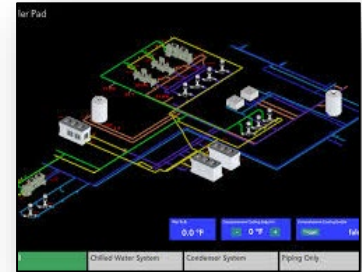 - NIST SP 800-171

Integrating resilience & cyber requirements into policy maintains alignment during execution.

- **Alternative Financing Contracts**
  - *Policy on ESPCs and UESCs* (Nov '18) requires incorporation of ER, CS, and Maintenance, Repair & Replacement (MR&R) costs into projects

  - *Utilities Privatization (UP) Supplemental Guidance* incorporates ER, CS, and metrics tracking into UP projects (Feb '19)

  - *Oversight of Third-Party Financed Energy Projects* (est. Nov '19) will help strengthen oversight to delivering ER & CS, and guaranteed savings

    - Strengthens DoD's post-award oversight of ESPC, UESC and third-party financed energy projects (PPA/EUL/2922a)
    - Requires Quality Assurance & Surveillance Plans and M&V Plans
    - Annual review of M&V and performance assurance by the Contracting Officer/Representative prior to payment

Integrating resilience & cyber requirements into policy maintains alignment during execution.

ODASD(Energy) Energy Resilience Timeline

Sustainment

- First ERCIP Guidance to Require MIT-LL ERA Tool Output For Project Selection
- First AEMRR Guidance to Include ER Metrics and Standards
- Utilities Privatization Guidance Updated to Include ER
- ERREs Planned
- **2020**
- 3rd ERRE
- 2nd ERRE
- Policy on ESPCs/UESCs Updated to Include ER
- Demand Response Guidance Updated to Include ER
- 1st Energy Resilience Readiness Exercise (ERRE)
- **2019**
- IEP Requirements Updated to Include ER
- RFQ Released for Study of Alternative Financing For ER Projects
- First ERCIP Guidance to Include ER Released
- RFI Released for Study of Alternative Financing For ER Projects
- **2018**
- MIT-LL Study and Initial Development of ERA Tool Completed
- OM&T Strategy and Implementation Guidance Released
- DoDI 4170.11 Updated – codified ER definition and requirements
- **2017**
- Broadened initiative from "electric" to "energy"
- **2016**
- Study to Investigate Business Case Analysis Approaches for ER Commissioned with MIT-LL
- **2015**
- **2014**
- DoD Electric Power Resilience Memo Released – first definition and requirements established
- Electric Power Resilience Working Group Established
- **2013**
- Shift from energy "security" to "resilience"
- **2012**

DoD implemented energy resilience policies, procedures, & tools - exercises ongoing to verify readiness & inform unknown gaps.

Energy & Water Technology Testbed (ESTCP)

- **Objective:** **Accelerate deployment of new proven technologies in DoD facilities**
  - DoD facilities staff/Utilities/ESCOs gain experience with new technology
  - ESTCP funding reduces financial risk
  - Projects developed/implemented using UESC process provides direct example for future UESC applications

- **Additional Benefits:**
  - Continued operations of installed technology
  - Efficient project execution - Increase performance and cost data collection

ESTCP – Solicitations Update

Sustainment

- **FY 2018**
  - GHP with underground Thermal Energy Storage (Gulf Power, NAS Pensacola)
  - High efficiency dehumidification system (Two Army sites considering technology)
  - Performance-based unitary DX maintenance (Seeking utility partners to advise)
  - Screening tool for envelope and duct leakage (SDG&E consulting with project team)

- **FY 2019**
  - Direct chilled water aquifer Thermal Energy Storage (Dominion Energy)
  - Phase change actively managed Thermal Energy Storage (SCE consulting)
  - Intelligent circuit breakers (Gulf Power participating with EPRI)

- **FY 2020**
  - 2 projects selected for funding, both integrated with UESC projects

- **FY 2021 solicitation scheduled for January 2020**
  - Plan to include similar UESC-related topic

- **Military Energy Resilience Catalyst: Innovation Challenge (Converge Strategies & INL)**
  - **MERC**: Accelerator program aimed to build a community of practice for ER professionals from installation, program offices, & HQ levels, to strengthen DoD ER efforts & overcome barriers to project development

- **OASD(Sustainment) Website:**
  - https://www.acq.osd.mil/log/index.html

- **ODASD(Energy) Website:**
  - https://www.acq.osd.mil/log/ENR/index.html

- **Environmental Security Technology Certification Program (ESTCP):**
  - https://www.serdp-estcp.org/About-SERDP-and-ESTCP/About-ESTCP

- **ESTCP Cyber**
  - https://www.serdp-estcp.org/Tools-and-Training/Installation-Energy-and-Water/Cybersecurity

- **Military Energy Resilience Catalyst (MERC) Innovation Challenge:**
  - https://innovatedefense.net/merc/merc/signupLanding