Department of Defense
Installation Energy Program

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Energy, Installations & Environment
Installation Energy is Energy that Powers Our Military Installations

DoD’s Built Infrastructure

- Over 572,000 total assets
  - 275,000 buildings in over 2.2 billion square feet
- 160,000 non-tactical vehicles
- DoD’s reliance on the commercial electricity grid places continuity of critical missions at risk
- $4B annual energy cost is single largest base operating cost

DoD focus: Improve the energy resilience of our military bases and cybersecure our building systems to ensure mission readiness and assurance; Optimize installation energy and water performance to reduce base operating costs
DoD Installation Energy Priorities

• 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 (ECD TBD)
  — Alternative Financing Study (RFP issued)
  — For OSD ER efforts go to: http://www.acq.osd.mil/eie/IE/FEP_Energy_Resilience.html

• Comprehensive installation energy planning
  — DoD policy memo requiring Installation Energy Plans (Mar’ 16)
  — 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

• 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)
DoD Installation Energy Priorities

• Cybersecuring Facility Related Control Systems (FRCS)
  – DoD Policy Memo requires Components to Cybersecure FRCS (Mar ‘16)
    • Inventory and prioritize critical mission FRCS, establish resourcing requirements and implementation plans
  – FRCS Cyber UFC (Sep ‘16)
  – FRCS Cyber Manual (in development)
  – DFARs rule to ensure newly procured FRCS meet cyber requirements (in development)

• Overcoming Project Financing Challenges
  – Limited appropriated funds: SRM, ERCIP, MilCon
    • Prioritizing projects to provide power to critical military functions during power disruptions
  – Making the business case for alternative financing
    • ESPC/UESC/UP contracts/Power Purchase Agreements
      o Ensure projects provide access to reliable power to critical missions
      o Understand the long term financial risks to DoD
      o Identify best practices and lessons learned to improve contracts
        ➢ Better defining requirements (right sizing)
        ➢ Incorporating performance metrics (accountability)
        ➢ Post award monitoring (M&V)
ESTCP – Energy and Water Technology Testbed

• Feb 2017 - ESTCP issued a solicitation for technology demonstrations integrated with UESCs
• Objective: Accelerate deployment of proven technologies in DoD facilities
  – Utilities/ESCOs gain experience with new technology.
  – 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 – Energy and Water Technology Testbed

Solicitation update:

• Lots of interest
• 4 projects selected for funding
  – 2 integrated with UESC projects, 2 coordinated with utility partners
• Options proposed for project integration, but specific approach TBD.
• FY19 solicitation scheduled for early January, 2018
  – Plan to include similar UESC-related topic.
  – www.SERDP-ESTCP.org – sign up for mailing list