

Sustainability Challenges from an Overseas COCOM Perspective

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Agenda

- DOD Sustainability Guidance and Docs
- US European Command Overview
- Case studies: Energy and Water
 - Energy efficiency standards for new buildings in Europe
 - Water quality at an overseas military location
- Other Challenges
- Play it forward: Interoperability Impacts
- What can we affect?



DOD Sustainability Goals

- DoD Strategic Sustainability Performance Plan (USD(A&L), 2011)
 - Goal 1: Use of fossil fuels reduced
 - Goal 2: Water resources management improved
 - Goal 3: Greenhouse gas emissions from Scope 1 and 2 sources reduced 34% from FY2008 by FY2020
 - Goal 4: Greenhouse gas emissions from Scope 3 sources reduced 13.5% from FY2008 by FY2020
 - Goal 5: Solid waste minimized and optimally managed
 - Goal 6: The use and release of chemicals of environmental concern minimized
 - Goal 7: Sustainability practices become the norm
 - Goal 8: Sustainability built into DoD management systems



US EUCOM Overview

- Mission: to conduct military operations, international military partnering, and interagency partnering to enhance transatlantic security and defend the United States forward.
- EUCOM's theater (area of responsibility for which it is responsible for planning and conducting US military missions) includes 51 independent countries that extend beyond Europe into the Caucasus and includes Israel.
 - 10.7 million square miles of land
 - 13 million square miles of ocean



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US EUCOM Overview

Areas of Focus:

- Ballistic Missile Defense
- Building Partnership Capacity
- Support to NATO/ISAF
- Energy Security
- Respond to Humanitarian Crisis
- Foster Interagency Cooperation
- Enhance Transatlantic Security

U.S. Bases in Theater: 28 main operating bases

- Navy: 4
- Air Force: 8
- Army: 16
- Marines: 0

In Theater: 218,424

- Navy: 6,403
- Air Force: 31,298
- Army: 43,157
- Marines: 1052
- Civilian: 29,598
- Military Dependents: 85,744



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Overarching Guidance on Operational Energy

- Operational Energy Strategy (DSD, May 2011)
 - Three-fold approach:
 - More Fight, Less Fuel: Reduce Demand for Energy in Military Operations
 - More Options, Less Risk: Expand and Secure Energy Supplies for Military Operations
 - More Capability, Less Cost: Build Energy Security into the Future Force



Overarching Guidance on Operational Energy

- Operational Energy Strategy: Implementation Plan (SecDef, 6 Mar 2012)
 - Target 1: Measure Operational Energy Consumption (COCOM OCR)
 - Target 2: Improve Energy Performance and efficiency in Operations and Training (COCOM OCR)
 - Target 3: Promote Operational Energy Innovation
 - Target 4: Improve Operational Energy Security at Fixed Installations (COCOM OCR)
 - Target 5: Promote the Development of Alternative Fuels
 - Target 6: Incorporate Energy Security Considerations into Requirements and Acquisition
 - Target 7: Adapt Policy, Doctrine, Professional Military Education, and Combatant Command Activities (COCOM OPR)



Energy Efficiency

New building requirements

- Spain: all new or renovated buildings must integrate solar thermal energy to heat 30%-70% of domestic hot water (Mar 2006)
- Germany: a minimum of 14% of the energy for heating and hot water in new buildings must be from renewable power (Jan 2009)
- Italy: New buildings must use renewable energy sources such as solar panels to provide at least 50% of their daily hot water usage (Dec 2006)

US Building Requirements in Host Nation

- LEED Silver Standard required in new federal construction starting FY12

Percent	Renewable Energy Points
2.5%	1
7.5%	2
12.5%	3



Resulting Challenges

- Unfavorable perception – US non-attainment of host nation energy efficiency requirements could send a message of indifference when it comes to being good stewards of the host nation's environment
- Partner engagement – more difficult to engage on climate change, energy security, or sustainable basing topics with partner nations when we may not be perceived as “walking the walk”
- Implementation of energy efficiency standards in new construction often comes with higher initial capital costs. New military construction (> \$750K) must be approved by Congress. In today's fiscal climate, it is more difficult to gain approval for projects with higher initial costs regardless of the ROI period.



Overarching Guidance on Water Quality at Overseas Bases

- Overseas Environmental Baseline Guidance Document (OEBGD) - *provides criteria, standards, and management practices for environmental compliance at DoD installations overseas (DoD 4715.05-G, May 1, 2007)*
 - provides criteria and management practices to be used by DoD Environmental Executive Agents (EEA) in determining Final Governing Standards (FGS)
 - establishes standards for environmental compliance at DoD controlled or operated installations in countries for which no FGS have been established
- Final Governing Standards (FGS) - A comprehensive set of country-specific substantive provisions, typically technical limitations on effluent, discharges, etc., or a specific management practice.



Water Quality Case Study

- *June 2007*: Trash crisis raises concerns; Public Health Evaluation requested.
- *Nov 2007*: US and host nation authorities agree to work together; US granted permission to collect water samples.
- *Jun 2008*: **Contaminated tap water found at off-base homes. Sampling results lead to first relocations of U.S. personnel living off-base.**
- *Jul 2008*: **Bottled Water Advisory** issued for U.S. personnel living off-base.
- *Nov 2008*: **New Lease Suspension Zones** established based on collected data, and new health protective lease clauses implemented for off-base rentals.
- *Nov 2009*: Water Distribution Point installed on base to provide free drinking water to U.S. personnel living off base.



Resulting Challenges

- Risk offending the host nation :
 - Differences in sampling criteria and process inadvertently challenges the host nation's procedures
 - subsequent relocation of families out of the neighborhoods may send the "not good enough for the US" message
 - New Lease Suspension Zones likely builds resentment among realtors and landlords
- US Impact:
 - Significant costs and inconvenience to the military and civilian Service members (relocations, bottled water, water distribution points)
 - Frustration from the environmental compliance side (resolving points of compliance questions, operator's training certificate requirements)



Other Challenges

- Power requirements
- Wastewater
- Communications and reliability
- DoD material specs (e.g. concrete)
- Maintenance and lifecycle differences
- Technical skills for maintenance or operation
- AT/FP considerations and requirements for buildings and bases
- Perception
- Consumer patterns
- Return on Investment timelines
- Shrinking budgets
- US/DoD standards



Interoperability Impacts

- Drinking water quality
 - Identifying issues at overseas bases improves combined basing during contingencies
 - Reduces secondary impacts such as bottled water shipment, waste, etc.
- Operational energy generation and consumption
 - Sustainable basing efforts often retroactive
 - Proven technologies CONUS or at forward bases allow first iteration implementation



Photo: US Army, DoD Strategic Sustainability Performance Plan



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What can we (collectively) affect?

Congressional approval of projects – probably not?

But...

- More robust identification of interoperability challenges
- Better selection of commercial off-the-shelf items
- Identifying and addressing compliance questions now
- Energy efficiency minimum standards in construction (e.g. motion sensors for lights)
- Cultural change – consumer demand
- Education for senior leadership



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QUESTIONS?



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