



Sustainable Infrastructure in the Department of Defense

Col Bart Barnhart
ODUSD(I&E)/EM
June 16, 2010



"PRESERVING OUR RESOURCES — PROTECTING OUR FUTURE"

NDIA

National Defense Industrial Association

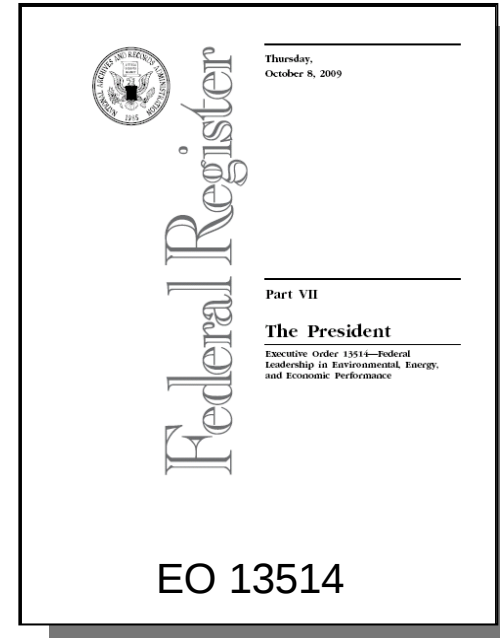
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What is Sustainability ???

➤ At the Federal level

- ♦ Vision: ... *create a **clean energy economy** to **increase National prosperity**, promote **energy security**, protect taxpayer **interests**, and safeguard **our environment** ...*
- ♦ Definition: ... *create/maintain conditions where humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of future generations*



➤ DoD definitions (note the mission focus!!!)

- ♦ DoD Dictionary (Joint Pub 1-02): *Ability to maintain the necessary level and duration of operational activity to **achieve military objectives***
- ♦ Unified Facilities Criteria: *Capacity to **continue the mission without compromise** ... **operate** into the future **without decline** – either in the mission or the natural and man-made systems that support it*

DoD sees a strong linkage between Sustainability and accomplishing our nation's military objectives



Sustainability – Mission

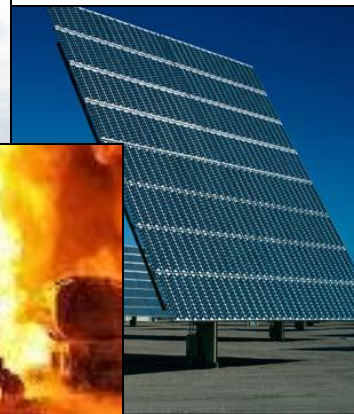
The Linkup

➤ Sustainability enhances DoD operational capability

- ♦ Energy conservation & renewable energy reduce *grid dependency* & promote *energy security*; secures warfighter *reachback*
- ♦ Reduced installation operational costs increases funds available for direct mission needs

➤ Sustainability reduces DoD operational risk

- ♦ Low fuel appetite = Fewer convoys
- ♦ Fewer convoys = Less risk
- ♦ Fully burdened cost of fuel
 - Includes cost to get fuel to fight; some estimates say \$400/gal
 - Iraq, May '08; 44 tanker trucks, 220Kgal lost to insurgent attacks
 - What about casualties???





Executive Order 13514

➤ **Drives each Agency to build a Strategic Sustainability Performance Plan (SSPP)**

➤ **Agency Goals**

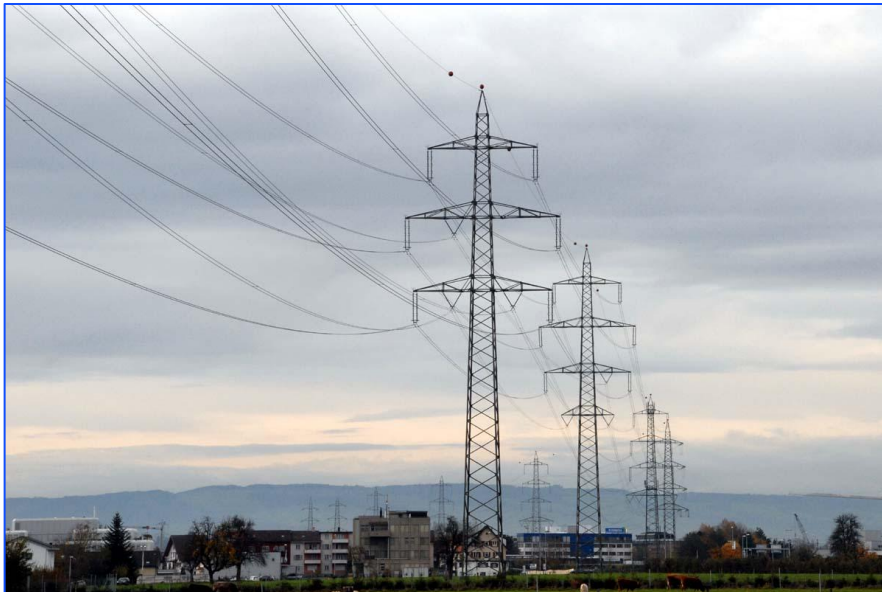
- ◆ **Set scope 1 & 2 Greenhouse Gas (GHG) emission reduction target**
- ◆ **Set scope 3 GHG emission reduction target**
- ◆ **Accomplish comprehensive GHG emissions inventory**
- ◆ **Advance regional and local integrated planning**
- ◆ **Improve water efficiency and management**
- ◆ **Promote pollution prevention and eliminate waste**
- ◆ **Implement high performance sustainable buildings**
- ◆ **Advance sustainable acquisition**
- ◆ **Promote electronics stewardship**
- ◆ **Sustain environmental management – EMS**

**Also in
EO 13423**



DoD Sustainable Infrastructure

- **EO 13514 focuses on GHG emission reductions**
 - ◆ **DoD Scope 1 & 2 target: 34% reduction by 2020**
- **How will we get to 34% ???**
 - ◆ **Reduce installation energy *consumption* 30% by FY15 (EISA reqmt), 37.5% by FY20**
 - ◆ **Reduce transportation fuels use 18% by FY20**



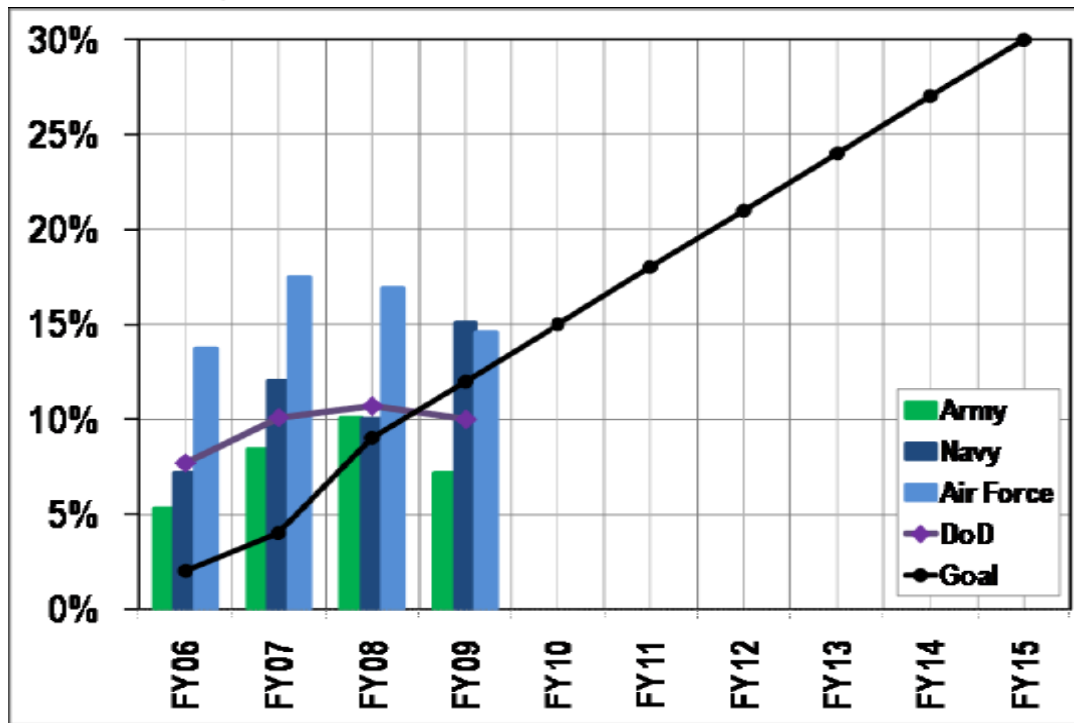


DoD Sustainable Infrastructure

Energy Challenges

- Reduce facility energy consumption 30% by FY15, 37.5% by FY20

- ◆ DoD Energy Intensity



- ◆ Will the current level of investment in ECIP/ESPC/UESC be enough to get to 37.5% energy reduction by FY2020???



DoD Sustainable Infrastructure

Other Challenges

- **15% of existing DoD bldgs (>5kSF) conform to the Guiding Principles (GP's) by FY15**
 - ◆ **DoD bldgs >5Ksf = 75,740;**
15% = 11,361 bldgs
 - ◆ **Pushes whole bldg renovations; bldg must meet all GPs to be conformant**
 - ◆ **Not “standard,” entire bldg rarely renovated all at once; HVAC/electrical commonly left out**
 - ◆ **Meeting goal w/o SRM increase reduces flexibility for commanders**
- **EO directs continual progress to GP conformance for 100% of DoD bldgs**





DoD Sustainable Infrastructure

Other Challenges

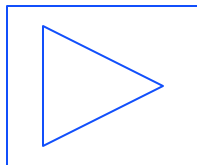
- **Must get immediate handle on training our “sustainability practitioners!”**
 - ◆ **Our bldg maintainers should be as smart about sustainable systems as our engineers**
 - ◆ **No good to build to the GP’s, LEED-Silver if our people can’t keep the systems at optimum efficiency**





DoD Sustainability Action Plan

- **USD(AT&L) is the DoD Senior Sustainability Officer**
- **USD(AT&L) set up Senior Sustainability Council; DUSD-level; first meeting was May 17th**
- **DoD Strategic Sustainability Performance Plan (SSPP) describes how DoD will execute EO 13514 agency goals**
 - ◆ **Success will require some level of budget transformation**
 - ◆ **FY12 budget pretty much done**
 - ◆ **OMB says – Tell us how much it will cost, we'll help you find \$\$\$**
- **DoDI to follow and codify sustainability policy**
- **SSPP review annually**





DoD Sustainable Infrastructure Action Plan

- **DoD Sustainable Infrastructure Policy**
 - ◆ **“50,000 foot level;” avoids major redirect to DoD Components; drives DoD to green building renovation and O&M (GP’s & LEED!!)**
 - ◆ **Stands up Infrastructure Sustainability Council**
 - ◆ **Dovetails with DoD SSPP goals**
- **Defense Sustainable Infrastructure Plan (DSIP)**
 - ◆ **Fleshes out the Sustainable Infrastructure pieces of DoD SSPP**
 - ◆ **To use Defense Installations Strategic Plan (DISP) as basis**
- **EXECUTE!!!**



Federal Sustainability and the DoD

- **Over 3M people** (nation's largest employer)
 - ◆ 1.3M active duty military
 - ◆ 684K civilian employees
 - ◆ 1.1M Guard/Reserve
- **Operating in**
 - ◆ All 50 States & 7 US territories
 - ◆ More than 160 countries
- **US single largest energy user**
 - ◆ ~0.9% of U.S. energy
 - ◆ ~80% of federal energy
- **Lots of Buildings**
 - ◆ 307K bldgs; ~75% of Fed bldgs
 - ◆ >2.2B SF; ~67% of Fed footprint
 - ◆ Replacement value >\$720B; ~47% of Fed Govt repl value
 - ◆ ~1/3 of DoD bldgs >50 yrs old
 - ◆ By 2025, 2/3 of DoD bldgs will be >50 yrs old
- **28.6M acres**
 - ◆ 593 installations & 5,579 sites
 - ◆ If DoD were a state, we'd be as large as ...

The success of Federal sustainability efforts depend on DoD success!!!

Pennsylvania

28.7M acres



Questions



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