



Sustainability Strategy at the Department of Defense

Environment, Energy Security, and Sustainability Symposium

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Overview

Acquisition, Technology and Logistics

- Sustainability Executive Orders
- DoD Sustainability Progress
- Strategic Sustainability Performance Plan (SSPP)
- Objectives, Goals, and Sub-Goals
- Governance Structure and Charter
- Next Steps



Sustainability Executive Orders

Acquisition, Technology and Logistics

➤ **Executive Order (EO) 13514 represents a decisive move by the Obama Administration to instill sustainability into government operations to realize:**

- Cost savings
- Energy security
- Reductions in greenhouse gas (GHG) emissions
- Spur creation of green economy



➤ **Agency Requirements:**

- Establish Sr. Sustainability Official
- Establish GHG emission reduction targets
- Prepare a Strategic Sustainability Performance Plan



Sustainability Executive Orders

Acquisition, Technology and Logistics

- **Executive Order (EO) 13514** represents a decisive move by the Obama Administration to instill sustainability into government operations
- **Topical Requirements**
 - GHG emission reductions
 - Increase energy efficiency
 - Improve water efficiency
 - Minimize generation of hazardous & non-hazardous waste
 - Advance sustainable acquisition
 - Sustainable Communities (coordination / planning)



EO 13423 "Strengthening Federal Environmental, Energy, and Transportation Management"

Signed January 24, 2007

Remains in Effect



What is Meant by “Sustainability”?

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- **“Sustainability” & “Sustainable”** mean to create and maintain conditions, under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations of Americans. - *EO 13514 and 13423*

Consideration of
sustainment
Mission—
readiness &
warfighting

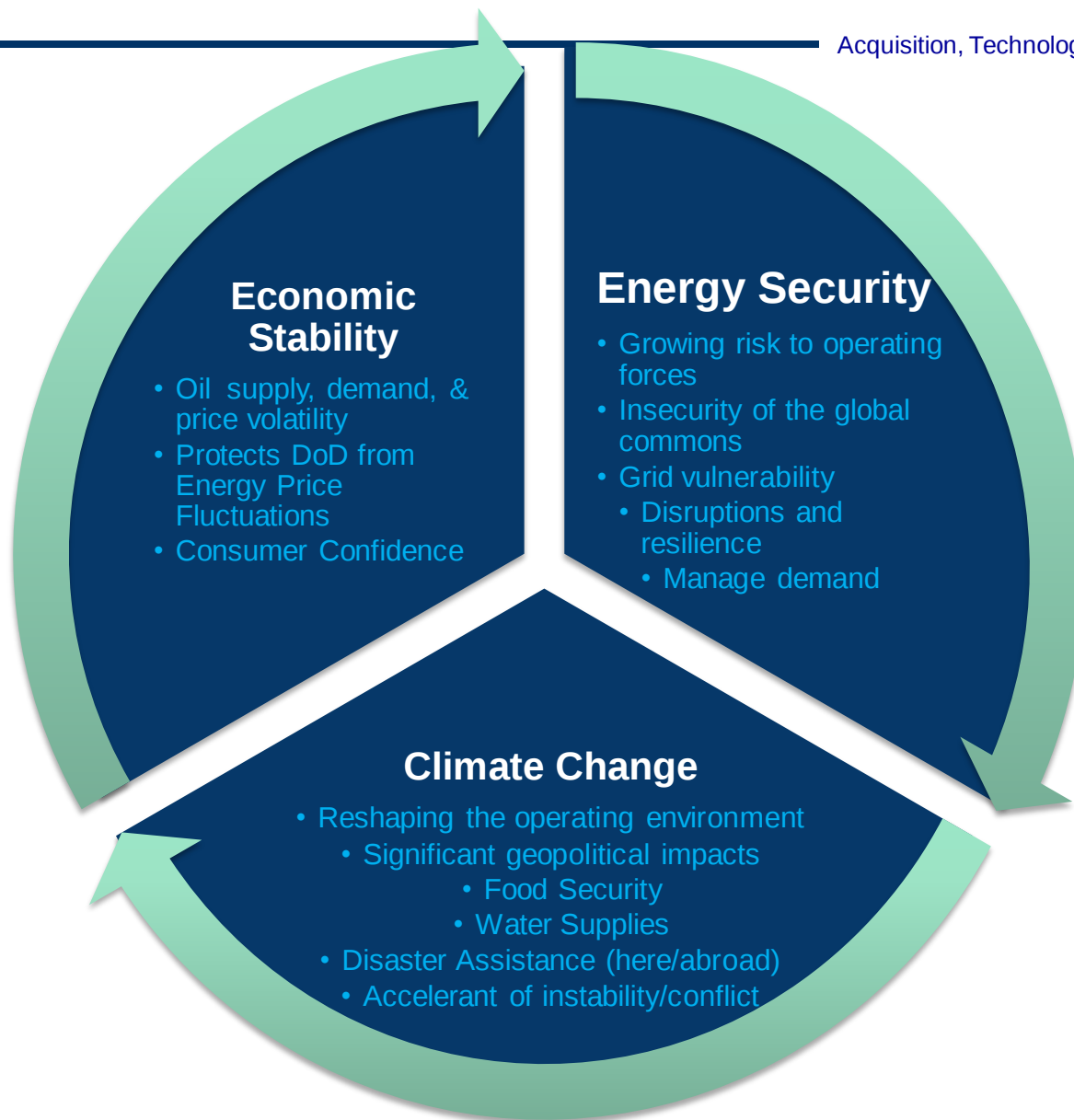
Costs
Consideration of life
cycle implications

Trade offs
Informed decision
making



What's in it for DoD? National Security!

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Energy-Intensive Force Structure

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➤ Impairs Operational Effectiveness

- Vulnerability to forces and mission
- Increases Casualties
- Constrains maneuver, limits endurance
- Dilutes combat effectiveness by increasing force



➤ Increases Cost

- Increases budget effects of volatile energy prices
- Funds used for energy are not available to buy capability



➤ Skews Force Structure

Current trends in program development will create a future force with an increased energy appetite



Sustainability – Strategic Drivers

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Climate Change and energy are two key issues that will play a significant role in future security environment. Although they produce distinct types of challenges, climate change, energy security and economic stability are inextricably linked. The actions that the Department takes now can prepare us to respond effectively to these challenges in the near term and in the future... **DoD will need to adjust to the impact of climate change on our facilities and military capabilities...** The Department is increasing its use of renewable energy supplies and reducing energy demand to improve operations effectiveness, reduce greenhouse gas emissions in support of US climate change initiatives, and protect the Department from energy price fluctuations. *QDR Feb 2010*



What is Sustainability to DoD?

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- The Department's vision of sustainability is to maintain the ability to operate into the future without decline – either in the mission or in the natural and manufactured systems that support it.
- DoD embraces sustainability as a means of improving mission accomplishment.
- Sustainability is not an individual Departmental program; rather, it is an organizing paradigm that applies to all DoD mission and program areas.





Background on DoD Progress

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Strategic Sustainability Performance Plan



CEQ Guidance on Content/Format

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- ***SECTION I – Agency Policy & Strategy***

- ❖ Agency Policy Statement
- ❖ Sustainability and the Agency Mission
- ❖ Greenhouse Gas Reduction Goals
- ❖ Plan Implementation
- ❖ Evaluating Return on Investment
- ❖ Transparency



- ***SECTION II -- Performance Review and Annual Update***

- ❖ Accomplishments
- ❖ Goals & Sub-Goals
- ❖ Methods to achieve reductions

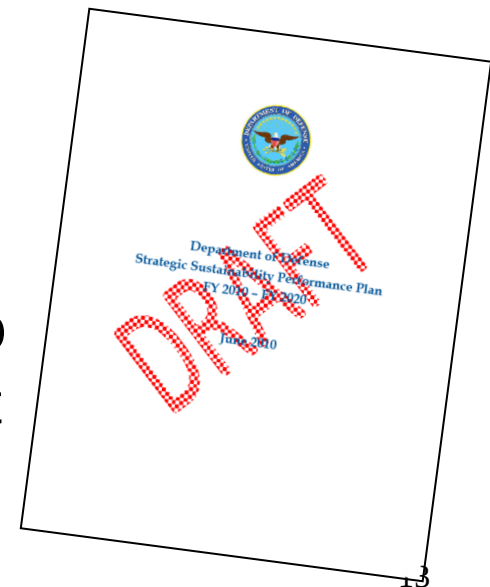




Strategic Sustainability Performance Plan (SSPP)

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- **Outlines goals and performance expectations for the next decade, establishing the path by which DoD will serve as a model of sustainability for the nation**
 - DoD is a Federal Leader in Reducing GHG Emissions
 - Ensure Continued Availability of Resources Critical to the DoD Mission
 - Ensure Ongoing Performance of DoD Assets by Minimizing Waste and Pollution
 - Achieve Continuous Improvement in the DoD Mission through Management Concepts Built on Sustainability and Community





SSPP Development

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Key people /offices to help draft and refine the plan

(Core) Sustainability
Integration Working Group
provides:

- Structure
- Strategic Focus
- Governance

Existing DoD Committee
Structure provides:

- Goal refinement
- Success Stories
- Progress to date





Approach to Building Goals and Sub-Goals

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- **Goals and Sub-Goals address the relevant requirements of:**
 - EO 13514 and EO 13423
 - EISA - The Energy Independence & Security Act of 2007
 - EPACT - The Energy Policy Act of 2005
 - Food, Conservation, and Energy Act of 2008 (aka The Farm Bill)
- **Based on DoD policies and programs (*existing, revised, and new*)**
- **Each goal and sub-goal is accompanied by:**
 - Schedule
 - Metric: ❶ *better defines each goal*; ❷ *a measure of performance*
 - Responsible Office for overseeing the goal/sub-goal



SSPP Goals

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Goal Number	SSPP Goal
Goal 1	The Use of Fossil Fuels Reduced
Goal 2	Water Resources Management Improved
Goal 3	Scope 1 and Scope 2 Greenhouse Gas Emissions Reduced by 34% by 2020
Goal 4	Scope 3 Greenhouse Gas Emissions Reduced by tbd % by 2020
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

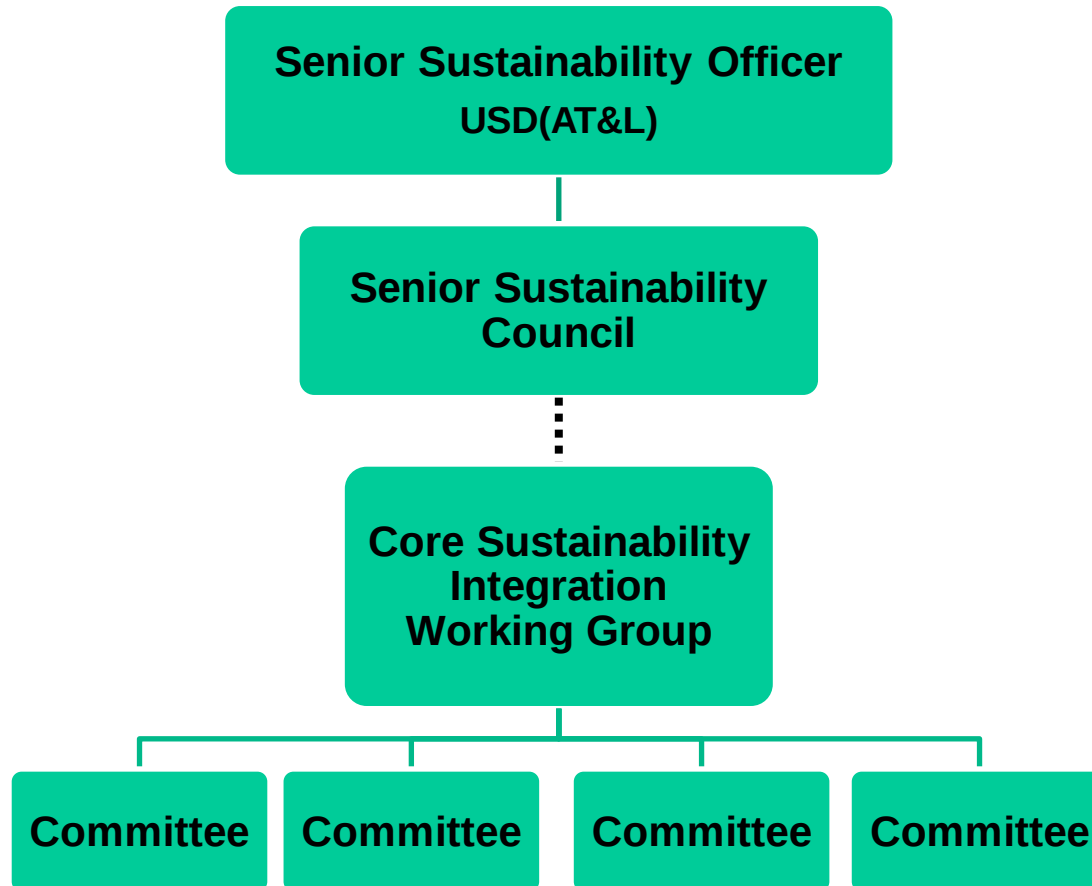


Senior Sustainability Governance Structure



Governance Structure

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Senior Sustainability Council Charter

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- Draft Charter out for Coordination
 - Institutionalizes the Senior Sustainability Council charged with developing strategy
 - Recommends policy and ensuring coordination across organizational and functional lines to support the goals and metrics outlined in the Strategic Sustainability Performance Plan
 - Minimally changed from the Charter of the Executive Committee for Implementation of EO 13423 which the Senior Sustainability Council will replace





Sustainability at a Glance

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Next Steps

- ✓ DoD's SSPP has been submitted CEQ/OMB for approval
- ✓ Start to track budgets and baseline
- ✓ Military Departments shall implement the objectives, goals, and sub-goals of the SSPP
- ✓ Focus on facilities and sustainable installations
- ✓ Capture success stories





Conclusion

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Services, programs, and DoD offices will need to work together to fulfill the goals outlined in the new Executive Order



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Back Up

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Background—Leadership Responsibilities

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Similar to EO 13423, it creates a Federal Environmental Executive, Senior Sustainability Officers, and a Senior Sustainability Council

Federal Environmental Executive

- The Federal Environmental Executive designated by the President
- The duties include:
 - Identifying strategies and tools to assist federal implement efforts
 - Monitoring and advising on the agencies' implementation of this order

Senior Sustainability Officers

- To be nominated by each agency within 30 days
- Senior agency official
- The duties include:
 - Preparing the GHG targets
 - Within 240 days, and annually thereafter, preparing and submitting an agency Strategic Sustainability Plan
 - Preparing and implementing the Plan
 - Monitoring performance and reporting progress
 - Reporting annually to the head of the agency on the adequacy and effectiveness of the Plan

Senior Sustainability Council

- Consisting of the Federal Sustainability Executive, and Senior Sustainability Officers
- The duties include:
 - Serving in the dual capacity of the Steering Committee under EO 13423
 - Advising the OMB Director and CEQ Chair
 - Facilitating the implementation of each agency's Plan
 - Promoting progress towards the goals of this order



Key DoD Dates for SSPP

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Timeline	Action
November 2009	Began drafting SSPP
March 2010	CEQ issues initial SSPP Guidance
12 - 24 April 2010	Final SSPP draft out for informal coordination
3 May – 18 May	Formal coordination process (aggressive schedule for DoD coordination)
21 May 2010	Final SSPP to USD AT&L
2 June 2010	USD AT&L submits SSPP to CEQ





SSPP Objectives & Example Goals (Draft)

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1. DoD is a Federal Leader in Reducing GHG Emissions

- Reduce Scope 1 & Scope 2 Greenhouse Gas Emissions by 34% by 2020
- Reduce Scope 3 GHG Emissions by [tbd]% by 2020

2. Ensure Continued Availability of Resources Critical to the DoD Mission

- Reduce the Use of Fossil Fuels for Stationary & Transportation Energy Needs
- Improve water efficiency

3. Ensure Ongoing Performance of DoD Assets by Minimizing Waste & Pollution

- Minimize Solid Waste and Release of Toxic and Hazardous Materials

4. Achieve Continuous Improvement in the DoD Mission through Management Concepts Built on Sustainability & Community

- Sustainable Procurement Practices Become the Norm
- Sustainability Built into DoD Management Systems



Part II: DoD Objectives, Goals and Sub-Goals

Acquisition, Technology and Logistics

Objective #1: The Continued Availability of Resources Critical to the DoD Mission is Ensured

GOAL #1: The Use of Fossil Fuels Reduced

1.1	Energy Intensity by DoD Facilities Reduced by 30% of FY 2003 Levels by FY 2015 and 37.5% by FY 2020
1.2	18.3% of Energy Consumed by DoD Facilities is Produced or Procured from Renewable Sources by 2020
1.3	Use of Petroleum Products by Vehicle Fleets Reduced 30% by 2020 Relative to 2005

GOAL #2: Water Resources Management Improved

2.1	Potable Water Consumption Intensity by Facilities Reduced by 26% of FY 2007 Levels by FY 2020
2.2	DoD Industrial and Irrigation Water Consumption Reduced by 20% of FY 2010 Levels by FY 2020
2.3	All DoD Development and Redevelopment Projects of 5,000 Square Feet or Greater Maintain Pre-Development Hydrology to the Maximum Extent Technically Feasible



DoD Objectives, Goals and Sub-Goals, cont.

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Objective #2: DoD is a U.S. Government Leader in Reducing Greenhouse Gas Emissions

3	Reduce Greenhouse Gas Emissions from Scope 1 and 2 Sources 34% by 2020, Relative to FY 2008
4	Reduce Greenhouse Gas Emissions from Scope 3 Sources tbd % by 2020, Relative to FY 2008
4.1	Greenhouse Gas Emissions from Employee Air Travel Reduced 15% by FY 2020 Relative to FY 2011
#	Sub-Goal
4.2	30% of Eligible Employees Teleworking at Least Once a Week, on a Regular, Recurring Basis, by 2020
4.3	50% of Non-Hazardous Solid Waste Diverted from Disposal in Landfills Not Owned by DoD by 2015 and Thereafter Through 2020



DoD Objectives, Goals and Sub-Goals, cont.

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Objective #3: The Ongoing Performance of DoD Assets Ensured by Minimizing Waste and Pollution

GOAL #5: Solid Waste Minimized and Optimally Managed

5.1	All DoD Organizations Implementing Policies by FY 2014 to Reduce the Use of Printing Paper
5.2	50% of Non-Hazardous Solid Waste Diverted from the Waste Stream by 2015 and Thereafter Through 2020
5.3	60% of Construction and Demolition Debris Diverted from the Waste Stream by 2015, and Thereafter Through 2020
5.4	Landfills Recovering Landfill Gas for Use by DoD: Two by FY 2012 and Ten by 2020

GOAL #6: The Use and Release of Chemicals of Environmental Concern Minimized

6.1	15% Reduction of On-Site Releases and Off-Site Transfers of Toxic Chemicals by 2020, Relative to 2007
6.2	100% of DoD Excess or Surplus Electronic Products Disposed of in Environmentally Sound Manner
6.3	100% of DoD Personnel and Contractors that Apply Pesticides Properly Certified Through 2020



DoD Objectives, Goals and Sub-Goals, cont.

Acquisition, Technology and Logistics

Objective #4: Continuous Improvement in the DoD Mission Achieved through Management and Practices Built on Sustainability and Community

GOAL #7: Sustainability Practices Become the Norm

7.1 95% of Procurement Conducted Sustainably

7.2 15% of Existing DoD Buildings Conform to the Guiding Principles on High Performance and Sustainable Buildings By FY 2015, Holding Through 2020

GOAL #8: Sustainability Built into DoD Management Systems

8.1 All Environmental Management Systems Effectively Implemented and Maintained

8.2 The Sustainability of Transportation and Energy Choices in Surrounding Areas Optimized by Coordinating with Related Regional and Local Planning

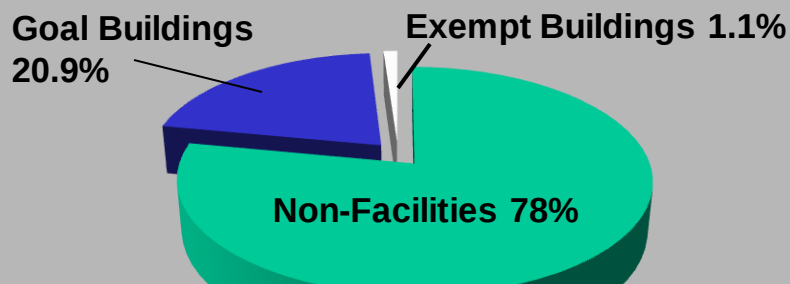
8.3 All DoD Installations Have Integrated Pest Management Plans Prepared, Reviewed, and Updated Annually by Pest Management Professionals



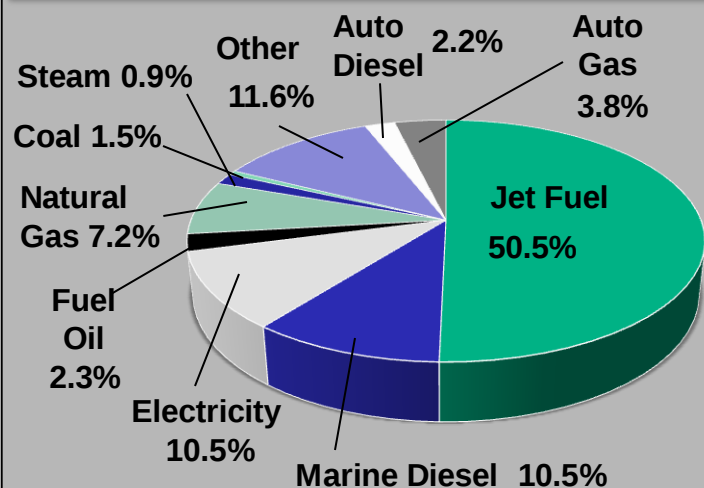
DoD Energy Use and Cost

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DoD Consumption (FY08)

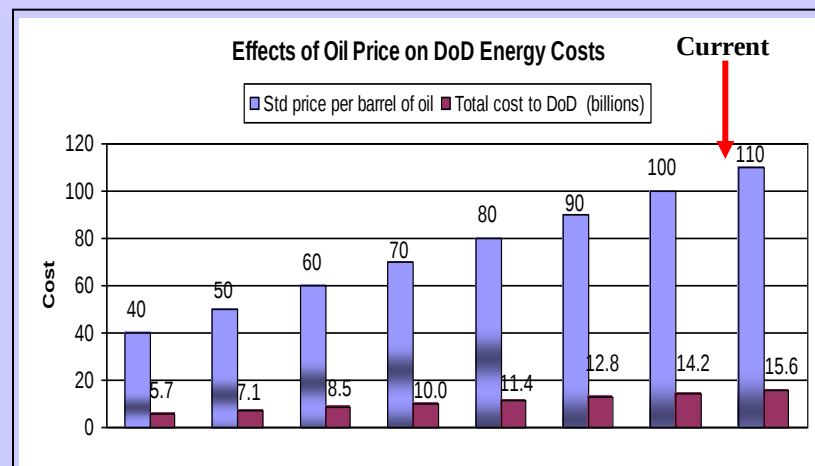


Last Year DOD Used 890 Trillion BTUs



Cost

- \$13.2B on energy in FY09
- FY09 PresBud built with standard price at \$84.09/Bbl → Current price: \$72.93/Bbl
- BUT in FY08 PresBud built with standard price at \$91/Bbl → Price became \$170.94/Bbl**
- **\$10/ barrel increase in oil increases DoD costs by > \$1.0B per year**



COST PAYOFF: Reduced energy use for mobility, fixed and tactical installations

OPERATIONAL PAYOFF: Increased operational effectiveness



Part II: DoD Correlation to CEQ GOALS

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Red: exceeds federal requirements, Blue: same as requirements

CEQ/OMB GOALS

DoD GOALS/Sub-Goals

Scope 1 & 2 GHG Reduction	Goal 3 (Reduce by 34% by 2020)
Scope 3 GHG Reduction.	Goal 4 (Reduce by [TBD]% by 2020)
Develop, Maintain GHG Inventory	<i>verbal OK by CEQ to discuss in lieu of goal</i>
Sustainable Buildings.	Sub-Goal 7.2 (15% by FY15, 25% by FY20)
Regional and Local Planning	Sub-Goal 8.2
Water Use Efficiency & Management	Goal 2 (Water Resources Management)
Pollution Prevention, Waste Elimination . .	Goals 5 and 6 (Solid Waste; Chemicals)
Sustainable Acquisition	Sub-Goal 7.2
Electronic Stewardship & Data Centers . .	Sub-Goals 1.1, 1.2, 6.2, 7.1
Agency Innovation	Sub-Goal 5.4 (Recovery, Use of Landfill Gas) (no federal requirement)



Comparison of EO 13514, EO 13423, and Statutory Requirements

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Area	EO 13514	EO 13423	Statutory Requirements
GHG Reduction	Establish agency-wide reduction target (%) Conduct, and report annual GHG inventory	None	None
Energy Efficiency	No building energy efficiency target. Reduce fleet vehicle petroleum use at least 2% annually through FY 2020 vs. FY 2005 Use low GHG and alternative fuel vehicles Optimize the number of fleet vehicles Transit, travel and conferencing strategy to support low-carbon commuting and travel	Reduce building energy intensity by 3% annually, or 30% by FY 2015 vs. FY 2003. Reduce fleet vehicle petroleum use by 2% annually through FY 2020 vs. FY 2005 Increase non-petroleum fuel use 10% annually by FY 2015 vs. FY 2005	Reduce building energy intensity by 3% annually, or 30% by FY 2015 vs. FY 2003 (EISA Sec. 431) Reduce vehicle petroleum use 20% by FY 2015, vs. FY 2005 (EISA Sec. 142) Increase non-petroleum fuel use 10% annually by FY 2015 vs. FY 2005 (EISA Sec. 142), and purchase low GHG emitting vehicles (EISA Sec. 141)
Renewable Energy	50% of the statutorily required renewable energy in any fiscal year comes from “new” renewable sources	Same	3% Renewable, FY 2007-2009 5% Renewable, FY 2010-2012 7.5% Renewable, FY 2013 and beyond (EPACT, Sec. 203)



Comparison of EO 13514, EO 13423, and Statutory Requirements

Acquisition, Technology and Logistics

Area	EO 13514	EO 13423	Statutory Requirements
Reporting	OMB Scorecard progress implementing EO. Publicly publish scorecard results.		Scorecard process (EISA Sec. 432)
Sustainable Communities	Participate in regional planning and recognize transportation infrastructure Align Federal policies to local planning for energy choices Include energy in new facility EA and EIS Coordinate with ecosystem, watershed and environmental management programs		
Budget Plan	Develop and implement Sustainability Performance Plan, including mission and budget, coordinated with General council, CIO, CAO, and Real Property Officer		
Coordination	Agencies coordinate recommendations with CEQ		



Comparison of EO 13514, EO 13423, and Statutory Requirements

Acquisition, Technology and Logistics

Area	EO 13514	EO 13423	Statutory Requirements
Water Conservation	<i>Potable:</i> Reduce 2% annually vs. FY 2007 or 26% by FY 2026 <i>Industrial & landscaping:</i> 2% vs. FY 2010 or 20% by 2020 <i>Stormwater:</i> Implement SW Guidance Implement water reuse strategies Avoid on-site groundwater extraction	Reduce water consumption by 2% annually vs. FY 2007 or 16% by FY 2015	Stormwater Guidance to preserve site hydrology for facilities where footprint exceeds 5000 sf (EISA Sec. 438)
Sustainable Buildings	All new and modernized buildings that begin planning process in 2020 must be designed to achieved zero-net energy by 2030.	No specific zero net energy requirement	New or renovated buildings must reduce fossil fuel-generated energy consumption by 55% vs. FY 2003 by FY 2010 and 100% by FY 2030 (EISA Sec. 433)
	All new construction, major renovation, or repair and alteration <i>after 2010</i> must comply with HPSB Guiding Principles.	All new construction, major renovation, or repair and alteration must comply with HPSB Guiding Principles.	None
	15% of existing facilities and leases (<i>above 5,000 GSF</i>) must meet these requirements by FY 2015, <i>and make progress toward 100%.</i>	15% of existing facilities and leases must meet these requirements by FY 2015.	By 2010, federal agency leased space must have the ENERGY STAR® label (EISA Sec. 435)



Comparison of EO 13514, EO 13423, and Statutory Requirements

Acquisition, Technology and Logistics

Area	EO 13514	EO 13423	Statutory Requirements
Pollution Prevention	Minimize waste/pollutants by source reduction Increase diversion of waste organic materials Use integrated pest management practices Increase use of alternative chemicals, and decrease GHG-contributing chemicals use	Increase solid waste diversion and recycling EO implementing instructions - 35% recycling goal	Reporting requirements in EPCRA Sections 301 to 313. RCRA provisions not summarized herein Reduce building energy intensity by 3% annually, or 30% by FY 2015 vs. FY 2003 (EISA Sec. 431)
	Divert 50% of non-hazardous solid waste and 50% of construction debris by FY2015	Use 30% post consumer recycled paper	
	Reduce toxic and/or hazardous and solid waste generated by at least 10% annually.	Reduce building energy intensity by 3% annually, or 30% by FY 2015 vs. FY 2003.	
	Reduce paper use and use paper containing at least 30% postconsumer fiber content		
EMS	Continue implementation of existing EMS	Implement EMS to support EO	



Comparison of EO 13514, EO 13423, and Statutory Requirements

Acquisition, Technology and Logistics

Area	EO 13514	EO 13423	Statutory Requirements
Purchasing	Ensure that 95% of all new contracts require acquisition of products and services meet agency requirements for: - Recycled product content - Energy efficiency - Biobased content - Environmentally preferable - Non-ozone depleting - Non-toxic or less toxic alternatives	Ensure that 95% of all new contracts require acquisition of products and services meet agency requirements for: - Recycled product content - Energy efficiency - Biobased content - Environmentally preferable - Non-ozone depleting - Non-toxic or less toxic alternatives	Preferences in RCRA Sec. 6002 EPCRA provisions not included here
EPEAT	Ensure EPEAT registered electronic product compliance	95% of electronic product acquisitions must be EPEAT registered	
Computers, Data Centers	Enable power management, duplex printing, and other environmentally preferable features Use best practices in energy efficient management of servers, data centers	Enable the energy Star feature on agency computers	