Army Energy Work Group

Information Briefing

By

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Agenda

- Purpose
- Vision
- Goals
- History
- Who Participates
- Why Is Energy Important
- Linking It Together
- Conclusion

Purpose

- Form a Cross-Functional Team within the Army community to lead energy efficiency efforts through reduced consumption of petroleum-based fuels without degradation of capability and increased usage of alternative fuel / renewable energy.

- Provide the Army with a more holistic approach to managing energy by sharing information and linking efforts in order to gain synergy in efforts.

- Influence and shape policy to assist the Army to achieve goals established by Executive Orders and other mandates.

Vision

The Army Energy Work Group leads the Army's efforts in improving energy usage to become less reliant upon foreign sources of petroleum-based fossil fuels. Active leadership and participation from members will ensure mission success by aligning new advancements in equipment design with developments in alternative fuel and renewable energy sources to achieve greater energy efficiency resulting in secure, reliable, and sustainable energy to power Soldiers, equipment, and installations.

Goals

- Achieve holistic approach for Army Energy issues
- Eliminate / reduce energy waste in existing facilities
- Increase energy efficiency in new / renovated construction
- Reduce dependence on fossil fuels
- Promote discovery and use of alternative fuel sources
- Improve energy security

EO 13423

History

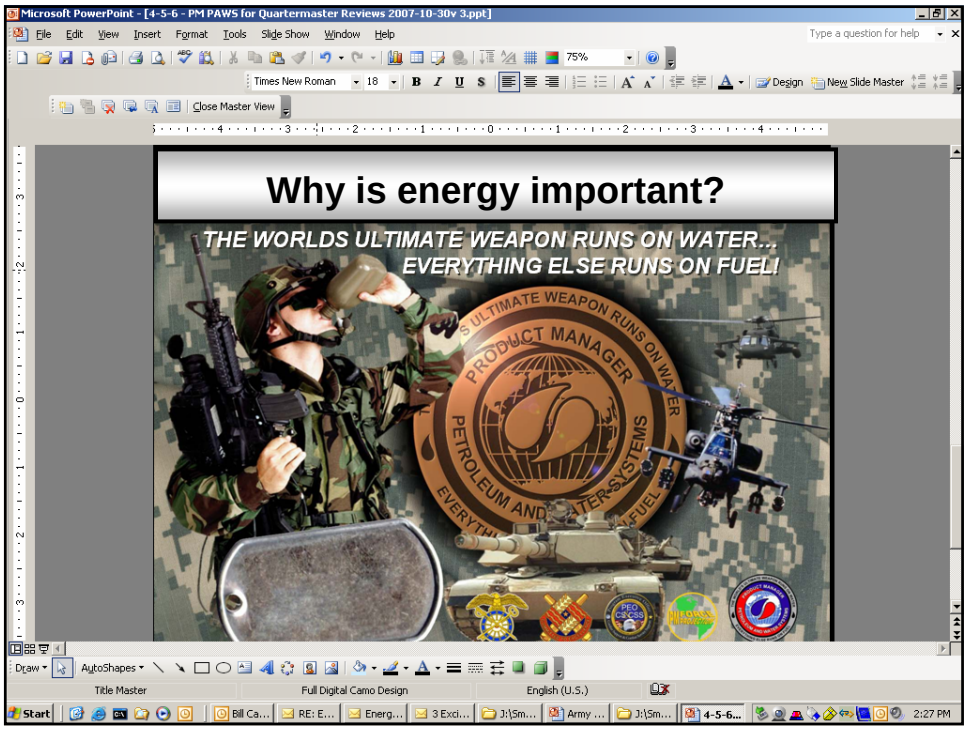
- Formed in early May 2007
- Potential tasker to brief a Senator on Army Energy initiatives
- Tasker never materialized, but many recognized the need for the group and its potential
- Information papers on alternative fuel / energy reduction
- Meets once per month and shares information throughout
- Feeds into OSD Energy Security Task Force

Who Participates

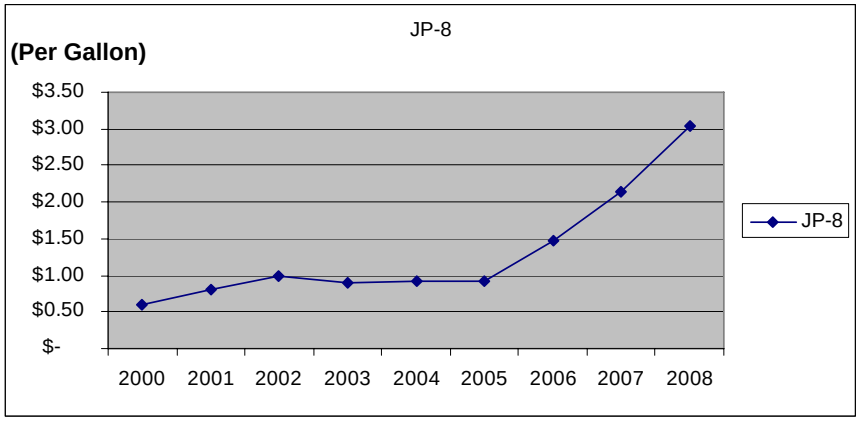
ASA(ALT) S&T	ASA(FMC) CE	ASA(I&E)
APC	Army G-4	IMCOM
ERDC	ACSIM	TRADOC
CASCOM	RDECOM	PSTF
LMI	TARDEC	Calibre
Army G-1	ACE	Army G-6
PM-Soldier Systems	PM-MEP	QMCS (PWD)

Energy and Security Group

Enhancing Soldier Logistics Readiness



Cost of JP-8 Over Time



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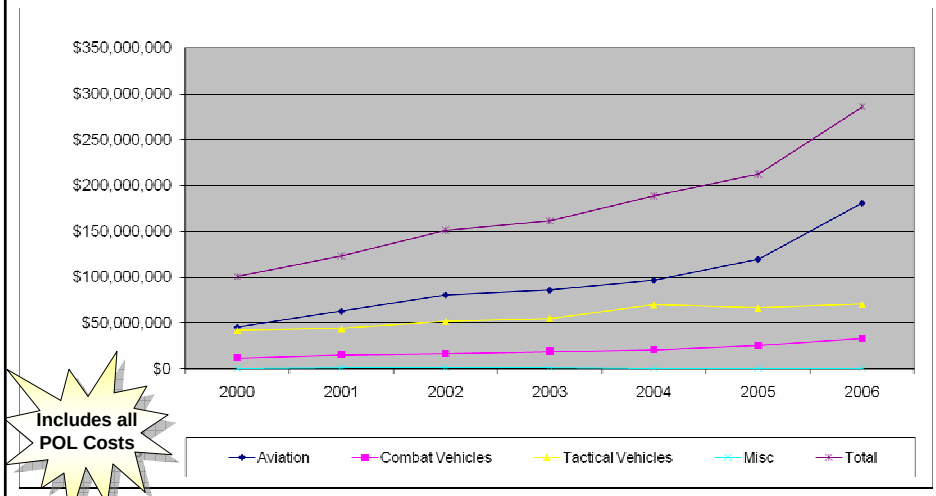
POL Cost by Major Category



Includes all POL Costs

Includes CONOPS

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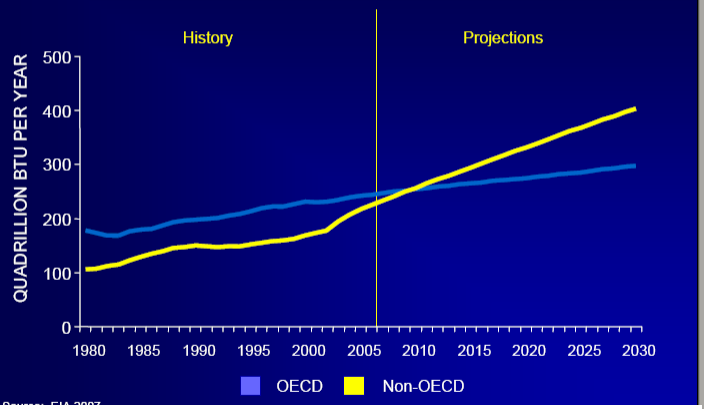
... And Energy Demand Growth Follows



Organization of Economic Cooperation and Development (OECD) – 30 Member Countries
Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Netherlands, New Zealand, Norway, Mexico, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States

The Hard Truth: Supply

The world is not running out of energy resources, but there are accumulating risks to continuing expansion of oil and natural gas production from the conventional sources relied upon historically. These risks create significant challenges to meeting projected total energy demand.

The Hard Truth: Energy Sources

To mitigate these risks, expansion of all economic energy sources will be required, including coal, nuclear, biomass, other renewables, and unconventional oil and natural gas. Each of these sources faces significant challenges including safety, environmental, political, or economic hurdles, and imposes infrastructure requirements for development and delivery.

NPC

Global Oil and Gas Study

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The Hard Truth: Energy Security

"Energy Independence" should not be confused with strengthening energy security. The concept of energy independence is not realistic in the foreseeable future, whereas U.S. energy security can be enhanced by moderating demand, expanding and diversifying domestic energy supplies, and strengthening global energy trade and investment. There can be no U.S. energy security without global energy security.

NPC

Global Oil and Gas Study

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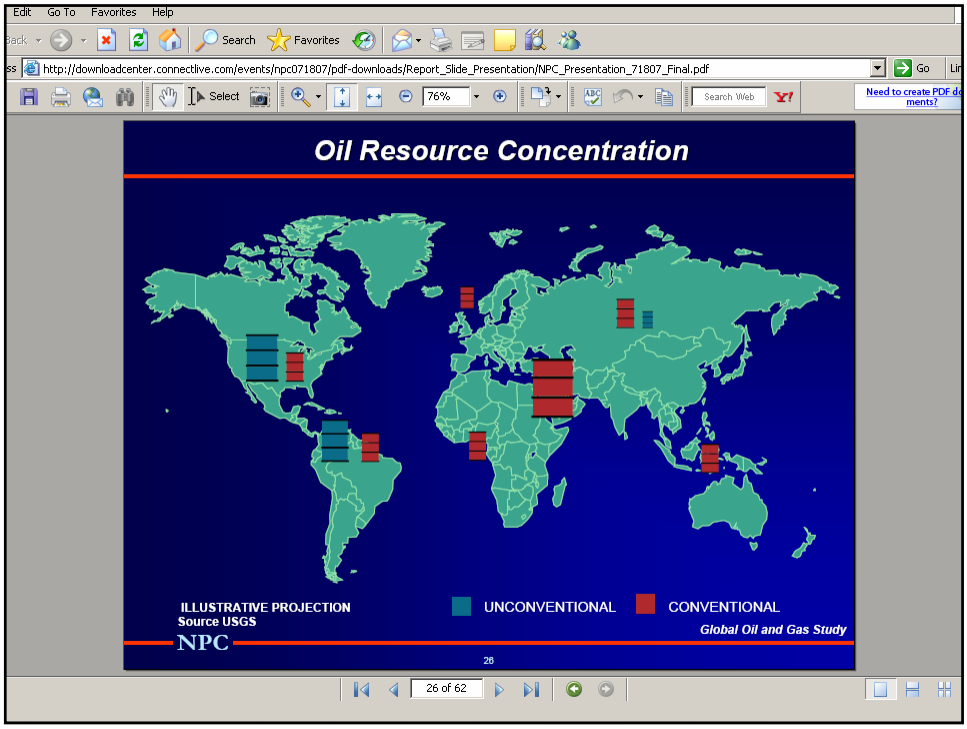
Oil Resource Concentration
ILLUSTRATIVE PROJECTION
Source USGS
UNCONVENTIONAL
CONVENTIONAL
Global Oil and Gas Study
NPC
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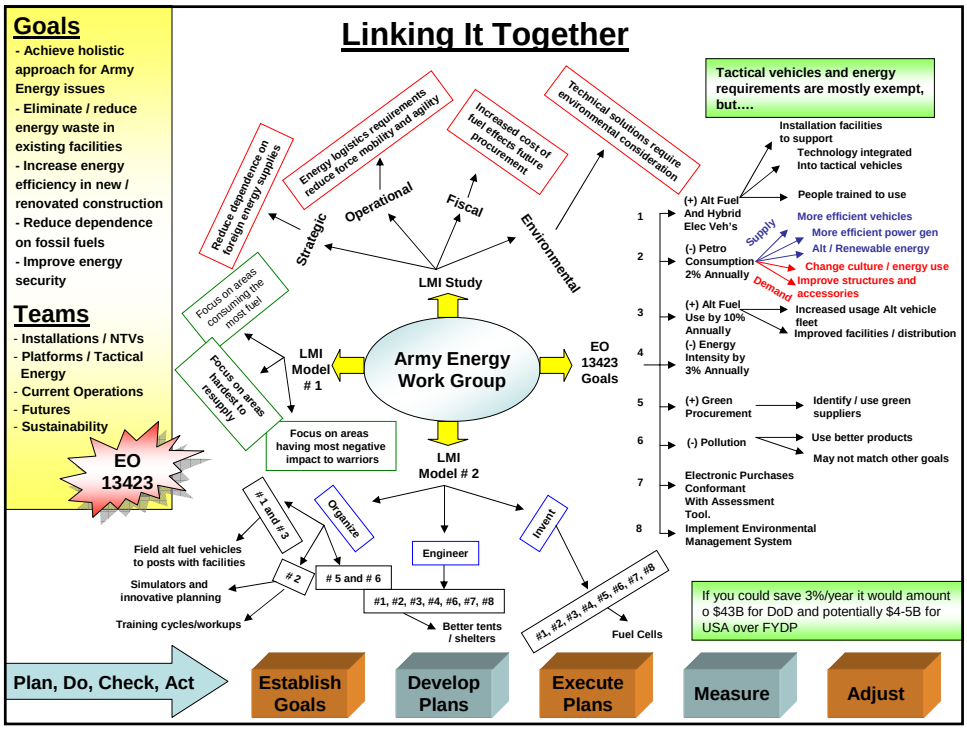
Goals
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- Reduce dependence on fossil fuels
- Improve energy security
Teams
- Installations / NTVs
- Platforms / Tactical Energy
- Current Operations
- Futures
- Sustainability
EO 13423
Linking It Together
Tactical vehicles and energy requirements are mostly exempt, but….
Reduce dependence on foreign energy supplies
Energy logistics requirements reduce force mobility and agility
Increased cost of fuel effects future procurement
Technical solutions require environmental consideration
Strategic
Operational
Fiscal
Environmental
LMI Study
Focus on areas consuming the most fuel
Focus on areas hardest to resupply
LMI Model # 1
Army Energy Work Group
EO 13423 Goals
Focus on areas having most negative impact to warriors
LMI Model # 2
1 and # 3
Organize
Engineer
Invent
Field alt fuel vehicles to posts with facilities
Simulators and innovative planning
Training cycles/workups
2
5 and # 6
#1, #2, #3, #4, #6, #7, #8
Better tents / shelters
#1, #2, #3, #4, #5, #6, #7, #8
Fuel Cells
1 (+) Alt Fuel And Hybrid Elec Veh's
Installation facilities to support
Technology integrated Into tactical vehicles
People trained to use
2 (-) Petro Consumption 2% Annually
Supply
More efficient vehicles
More efficient power gen
Alt / Renewable energy
Demand
Change culture / energy use
Improve structures and accessories
3 (+) Alt Fuel Use by 10% Annually
Increased usage Alt vehicle fleet
Improved facilities / distribution
4 (-) Energy Intensity by 3% Annually
5 (+) Green Procurement
Identify / use green suppliers
6 (-) Pollution
Use better products
May not match other goals
7 Electronic Purchases Conformant With Assessment Tool.
8 Implement Environmental Management System
If you could save 3%/year it would amount o $43B for DoD and potentially $4-5B for USA over FYDP
Plan, Do, Check, Act
Establish Goals
Develop Plans
Execute Plans
Measure
Adjust

Successes / On-Going Projects

- Fully Burdened Cost of Fuel Policy Memorandum
- American Clean Energy Systems (ACES) Product Testing
- Power Surety Task Force Support
  - ✓ Tent Foaming
  - ✓ Renewable Energy Project at National Training Center
  - ✓ Net Zero Plus Joint Concepts Technology Demonstration
- Platform Metric Analysis
- Consumption Factor Analysis Conference
- Integrated Responses to GAO, Congressional Requests, etc.
- Great Information Briefings
  - ✓ TARDEC: Synthetic Fuels Update
  - ✓ Army Corps of Engineers: Energy 101
  - ✓ OSMIS Database
  - ✓ Nuclear Power
  - ✓ ACSIM Energy Campaign Plan
- It's All About the Network

STRATEGY

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Conclusion

- Meets requirement for Cross-Functional Team mandated by EO 13423
- Information sharing / holistic effort
- Now is the time for progress. Urgent desire to become more energy efficient aligned with emerging technological breakthroughs.
- We will make a difference in both the current force and the future force

If you would like to be added to the distribution list,
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