

# Powering America's Defense

Energy and the Risks to National Security

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# Outline

- Background
- National security threats associated with energy
- DoD's role in addressing energy threats

# Background

- April 2007: *National Security and the Threat of Climate Change*



**NATIONAL SECURITY  
AND THE THREAT OF  
CLIMATE CHANGE**

[SecurityAndClimate.cna.org](http://SecurityAndClimate.cna.org)

- Finding: **Climate change, energy dependence, and national security** are a related set of global challenges
- May 2009: *Powering America's Defense*
- MAB studies differ from usual CNA studies:
  - Foundation funded
  - Results based largely on expert opinion of CNA's Military Advisory Board, not on rigorous analytical process

# CNA Military Advisory Board

Gen Chuck Wald, USAF, Ret. (chair)\*

Gen Charles Boyd, USAF, Ret.

Lt Gen Larry Farrell, USAF, Ret.\*

GEN Paul Kern, USA, Ret.\*

Gen Ronald Keys, USAF, Ret.

ADM Joe Lopez, USN, Ret.\*

Gen Robert Magnus, USMC, Ret.

VADM Dennis McGinn, USN, Ret.

ADM John Nathman, USN, Ret.

RADM David Oliver Jr., USN, Ret.

GEN Gordon Sullivan, USA, Ret.\*

VADM Richard Truly, USN, Ret.\*

# Questions Addressed in Current Study

- What are the **national security threats** associated with **energy**?
- What is an **appropriate role** for **DoD** in addressing these threats?

# National security threats associated with energy

- **Political:** Dependence on Oil
  - Entangles U.S. with unstable / hostile regimes
  - Undermines foreign policy objectives
  - Weakens international leverage
- **Economic:** Dependence on Fossil Fuels Undermines Economic Stability
  - Volatile prices and increasing prices
  - Price cycle likely to become shorter
  - Finite supplies, increasing demand

# National security threats associated with energy

- **Military:**

- Forward deployed forces:

- Inefficient Use and Overreliance on Oil

- Undermines combat effectiveness

- Extracts huge price: Dollars and lives

- Impact on tactical mobility

- Installations:

- Fragile domestic grid increases vulnerability of bases

- **Regulatory:**

- Carbon regulations are likely

- Financial penalties for carbon-intensive energy

# DoD's role in addressing energy threats

- **National Level:**

- Achieving energy security in carbon-constrained world is possible
- Smarter, more efficient use of power
  - Smart grid deployment is key
- Improved security through diversity, stability, and reliability
- A transformed transportation sector through electrification and bio-based mobility fuels

- **DoD Level:**

- DoD can contribute as a technological innovator, early adopter, and test-bed
- A proposed **Roadmap for Energy Security**

# A Roadmap for Energy Security

1. Integrate energy & climate into the planning processes
  - Include strategies throughout doctrine:
    - National Security Strategy
    - National Defense Strategy
    - National Military Strategy
    - QDR
  - Properly recognize energy in:
    - Defense Planning Scenarios
    - Wargames
    - Campaign Planning Models

General Jones & the NSC are making strides here

# A Roadmap for Energy Security

2. Design & deploy systems to reduce burden of inefficient energy use on troops in the field
  - Efficiency improvements are key: Generators are among the top energy users in the field
    - Example: foam insulated tents
  - Energy efficiency should be a factor in procuring new equipment, resetting & modernizing, and defining requirements
  - Smart micro-grids should be explored

# A Roadmap for Energy Security

3. Understand energy use at all levels of operations
  - Navy is employing stimulus funds to kickstart their efforts here

# A Roadmap for Energy Security

## 4. Transform installations through aggressive pursuit of:

- Energy efficiency
- Smart grid technologies
  - DoD can be the pioneer in smart grid
- Electrification of non-tactical vehicle fleet
  - Employ the Dept's large purchasing power

# A Roadmap for Energy Security

## 5. Expand distributed & renewable energy generation

- Reiterate: Energy efficiency should be done first
- Ensure DoD's critical missions have reliable, resilient electrical power
- Opportunity for community outreach
- Net Zero bases should be the goal (DOE partnership)

# A Roadmap for Energy Security

## 6. Invest in long-term shift to low-carbon liquid fuels

- Liquid petro fuels will be around for a long time
  - They are good at what they do!
  - Interoperability and availability of fuels is key
- DoD should be an active partner with DOE and other agencies
  - Not a problem to be solved by DoD acting alone

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