

Executive Summary

In 2007, the CNA Military Advisory Board (MAB) released the landmark report “*National Security and the Threat of Climate Change*,” which found that climate change constitutes a “threat multiplier” to existing security risks in some of the most volatile regions in the world. A 2008 National Intelligence Assessment confirmed the report finding that climate change is a serious threat to national security and long-term global stability. The MAB, which is comprised of some of the nation’s most respected retired admirals and generals, also found that “Climate change, national security, and energy dependence are a related set of global challenges.”

A year later, the CNA MAB reconvened to study America’s energy posture and further examine the issue of energy security and how it relates to climate change and national security. Moving beyond recent studies on the dangers of imported oil, this 2009 report finds that fossil fuels, as well as the nation’s fragile electricity grid, pose significant security threats to the country as a whole and the military in particular.

This report identifies a series of current risks created by America’s energy policies and practices that constitute a serious and urgent threat to national security—militarily, diplomatically, and economically:

- U.S. dependence on oil weakens international leverage, undermines foreign policy objectives, and entangles America with unstable or hostile regimes.
- Inefficient use and overreliance on oil burdens the military, undermines combat effec-

tiveness, and exacts a huge price tag—in dollars and lives.

- U.S. dependence on fossil fuels undermines economic stability, which is critical to national security.
- A fragile domestic electricity grid makes our domestic military installations, and their critical infrastructure, unnecessarily vulnerable to incident, whether deliberate or accidental.

Looking forward, the report warns that continuing business as usual is perilous because of the converging national security risks of energy demand and climate change:

- The market for fossil fuels will be shaped by finite supplies and increasing demand. Continuing our heavy reliance on these fuels is a security risk.
- Regulatory frameworks driven by climate change concerns will increase the costs—both economic and geopolitical—of using carbon-based fuels.
- Destabilization driven by ongoing climate change has the potential to add significantly to the mission burden of the U.S. military in fragile regions of the world.

Confronting these converging risks is critical to ensuring America’s secure energy future. Due to the destabilizing nature of increasingly scarce resources, the impacts of energy demand and climate change could increasingly drive military missions in this century. The first priority for the new Administration, the MAB recommends, is to

clearly and fully integrate energy security and climate change goals into national security and military planning processes.

Consistency with emerging climate policies should shape America's energy and national security planning; the U.S. should not pursue energy options inconsistent with the national response to climate change. Diversifying energy sources and moving away from fossil fuels where possible is critical to future energy security.

While the current financial crisis provides enormous pressure to delay addressing these critical energy challenges, the MAB warns against delay. The economic risks of this energy posture are also security risks. The U.S. consumes 25 percent of

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the world's oil production, yet controls less than 3 percent of an increasingly tight supply. Oil is traded on a world market, and the lack of excess global production makes that market volatile and vulnerable to manipulation by those who control the largest shares. Reliance on fossil fuels, and the impact it has on other economic instruments, affects our national security, largely because nations with strong economies tend to have the upper hand in foreign policy and global leadership. As economic cycles ebb and flow, the volatile cycle of fuel prices will become sharper and shorter, and without immediate action to address our na-

tion's long-term energy profile, the national security risks associated with the nation's and the military's current energy posture will worsen.

The Military Advisory Board calls on the Department of Defense (DoD) to take a leadership role—for government and the nation—in transforming America's energy posture. The DoD is the nation's single largest consumer of energy, and is seriously compromised by the nation's current energy posture. By addressing its own energy security needs, DoD can stimulate the market for new energy technologies and vehicle efficiencies. In policy and technology areas that would benefit the Department's operational capabilities, the Department's historical role as a technological innovator and incubator should be harnessed to benefit the nation as a whole.

Confronting this challenge is paramount for the military. To achieve the desired endstate, America must have a national approach. Securing the country's energy future will require the active leadership and consistent participation of governments at all levels, as well as that of all Americans.

Recognizing the enormity of this challenge, the MAB submits the following findings and Roadmap for Energy Security to the Administration and Department of Defense.

Findings:

1. The nation's current energy posture is a serious and urgent threat to national security.
 - a. Dependence on oil undermines America's national security on multiple fronts.

- b. The U.S.'s outdated, fragile, and overtaxed national electrical grid is a dangerously weak link in the national security infrastructure.
2. A business as usual approach to energy security poses an unacceptably high threat level from a series of converging risks.
3. Achieving energy security in a carbon-constrained world is possible, but will require concerted leadership and continuous focus.
4. The national security planning processes have not been sufficiently responsive to the security impacts of America's current energy posture.
5. In the course of addressing its most serious energy challenges, the Department of Defense can contribute to national solutions as a technological innovator, early adopter, and test-bed.

A Roadmap for Energy Security:

Priority 1: Energy security and climate change goals should be clearly integrated into national security and military planning processes.

Priority 2: DoD should design and deploy systems to reduce the burden that inefficient energy use places on our troops as they engage overseas.

Priority 3: DoD should understand its use of energy at all levels of operations. DoD should know its *carbon footprint*.

Priority 4: DoD should transform its use of energy at installations through aggressive pursuit of energy efficiency, smart grid technologies, and electrification of its vehicle fleet.

Priority 5: DoD should expand the adoption of distributed and renewable energy generation at its installations.

Priority 6: DoD should transform its long-term operational energy posture through investments in low-carbon liquid fuels that satisfy military performance requirements.