



RHUMB LINES

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The Way Ahead for Navy Energy

"I am asking you to let the reach of your imagination match the reach of the United States Navy and Marine Corps. I am asking you to make the future a more secure and better place."

– **The Honorable Ray Mabus, Secretary of the Navy**

The U.S. Navy relies heavily on a finite and unreliable stock of fossil fuels that will likely rise in cost in the future. Oil is a limited resource, highly concentrated in and purchased from volatile areas of the world. The U.S. consumes 25 percent of the world's oil but controls the production of three percent. This creates a vulnerability to U.S. energy security and thus national security. For this reason, the Secretary of the Navy, Ray Mabus, has declared improving naval energy security to be a strategic imperative. At the Naval Energy Forum on Oct. 14, Secretary Mabus announced five energy goals.

Department of the Navy energy targets

- The lifecycle energy cost of platforms, weapons systems, and buildings, the fully-burdened cost of fuel in powering these, and contractor energy footprint will be mandatory evaluation factors used when awarding contracts.
- The Navy will demonstrate a Green strike group of nuclear vessels and ships using biofuel in local operations by 2012. By 2016, the Navy will sail a "Great Green Fleet" composed of nuclear ships, surface combatants with hybrid electric power systems using biofuel, and aircraft flying only on biofuels.
- By 2015, the Department of the Navy (DoN) will reduce petroleum use in the commercial fleet of 50,000 vehicles by 50 percent by phasing in a composite fleet of flex fuel, hybrid electric, and neighborhood electric vehicles.
- By 2020, at least half of the DoN's shore-based energy requirements will come from alternative sources.
- By 2020, half of total DoN energy consumption will come from alternative sources.

Reform for an energy-secure Navy and Marine Corps

- Energy and acquisition reform, along with unmanned systems, is a main focus area for DoN leadership.
- Altering DoN energy consumption will serve as an example for the rest of the country.
- Adoption of new energy technologies has improved the strategic position of our nation through improvements in the tactical and operational capabilities of our forces. Technologies developed by the DoN today will be used for decades to come.
- The primary goal for energy reform is increased warfighting capability.

Key Messages

- The Department of the Navy's emerging energy strategy is centered on energy security, energy efficiency and environmental stewardship while remaining the preeminent maritime power.
- Energy security is critical to mission success. It safeguards our energy infrastructure and shields the Navy and Marine Corps from a volatile energy supply.
- Energy efficiency increases mission effectiveness. Efficiency improvements minimize operational risks, saving time, money, and lives.
- Environmental stewardship protects mission capabilities. Investment in environmentally responsible technologies afloat and ashore reduces green house gas emissions and lessens dependence on fossil fuels.

Facts & Figures

- The U.S. consumes 25% of the world's oil, but produces only 3%.
- More than 20% of the world's oil transits the Strait of Hormuz, and 3.3 million barrels a day go through the Gulf of Aden.
- Improvements to F/A-18 engines that will be in service by 2015 will improve efficiency by 3%, potentially saving 127,000 barrels of fuel a year after full implementation in the Fleet.
- Hybrid electric systems will save 8,500 barrels of fuel per ship per year.
- Solar power projects like those at Miramar and Camp Pendleton will increase solar capacity by 500% and will be the equivalent of providing power to 13,000 homes.