

Concerted Efforts Improve Our Energy Security

WELCOME TO THE winter 2012 issue of *Currents*. As I reflect on the past few busy months here in the Pentagon, I realize that it has been just over twenty years since October was first designated as National Energy Awareness Month. Since then, we as a Navy and a nation have made a concerted effort to improve energy security. Along the way, especially in recent years, the Navy and U.S. Marine Corps have enjoyed some headline-making progress.

October Energy Awareness Month

As you can read in this issue, numerous commands celebrated Energy Awareness Month in diverse ways. Activities ranged from a solar-powered band concert to a solar-powered cooking exhibit to an essay contest and a solar-powered dune buggy demonstration. It is inspiring to know that so many people are working hard to get the word out about ways we can all contribute to our nation's energy security.

2011 Naval Energy Forum

Perhaps the main Energy Awareness Month headline for the Department of Navy (DoN) was the 2011 Naval Energy Forum held 13–14 October in Washington, DC. It was an opportunity for key speakers from DoN, other governmental agencies, industry, and academia to meet face-to-face and share ideas in the crucial pursuit of energy security and independence. It was an insightful two days,

invest up to \$510 million during the next three years in partnership with the private sector to produce advanced biofuels. In response, the Honorable Ray Mabus, along with the Secretaries of the Department of Agriculture and Department of Energy, released a request for information to industry that requests specific ideas for how to leverage private capital markets to establish a commercially viable advanced biofuels industry.



As mentioned by SECNAV, the combined effort of these three Departments will:

- Effectively decrease U.S. dependence on foreign oil
- Create opportunities for U.S. landowners and operators to produce biomass for commercial energy production in ways that are both economically and environmentally sound
- Position U.S. companies to become global leaders in the production of drop-in biofuels

It is inspiring to know that so many people are working hard to get the word out about ways we can all contribute to our nation's energy security.

and I thank each of the speakers, especially Secretary of the Navy (SECNAV) Ray Mabus and Chief of Naval Operations Admiral Jonathan Greenert, who gave their time generously to further inspire the culture change necessary to ensure our energy security. You will learn more about the Forum and many of the Navy's energy programs in the spring 2012 issue of *Currents*.

Departments of the Navy, Energy, and Agriculture Team-Up

On 16 August 2011, President Obama announced that the U.S. Departments of Agriculture, Energy, and Navy will

In the meantime, the Navy has developed critical protocols needed to certify biofuels for use in Naval tactical systems. Per DoN requirements, biofuels must serve as 'drop-in' replacements for petroleum-based fuel, meaning they require no modification of current aircraft and ship engines, and are:

- Indistinguishable in performance for our warfighters
- Domestically produced and geographically distributed
- Priced competitively with petroleum

- Of a lower carbon footprint than traditional fossil fuels
- Without adverse impact to food production

Biofuels Pass Muster with DoN

The Navy's first aviation biofuel test program was centered on the F/A-18, which tested and evaluated the performance of a 50/50 biofuel blend in supersonic flight operations during the spring of 2010. Since then, examples of other certification tests include the Riverine Command Boat, MH-60 Seahawk, V-22 Osprey, T-45 Goshawk, EA-6B Prowler, AV-8B Harriet, MQ-8B Fire Scout, and the Self-Defense Test Ship.

Perhaps the most public demonstration of biofuel capability was done by the Blue Angels, which performed during Labor Day weekend at Naval Air Station Patuxent River using a 50/50 blend of conventional JP-5 jet fuel and camelina-based biofuel. Their ability to inspire awe was

What does it mean to be an 'Energy Warrior'? It means adopting an energy frugal mindset into every aspect of mission planning, training, and execution and leveraging significant investments in energy efficiency and alternative energy to increase chances of mission success. Going forward, I'd like to see all Navy academic institutions follow NPS's example and pick up the energy torch to develop our young Sailors and Marines into 'Energy Warriors,' as well. To do that, the lessons learned in the classroom must be turned into action at the fleet level. As such, each officer will be measured by:

- Promotion board guidelines and fitness report standards that are adjusted to value true 'Energy Warriors'
- Actions that help his or her command be competitive for the coveted Battle E



The Navy has developed critical protocols needed to certify biofuels for use in Naval tactical systems.

enhanced by the fact that they are the only flight-demonstration team that builds its entire routine using actual aerial combat maneuvers. As such, they provided the ultimate demonstration and confidence test as they executed their diamond formation, which requires a 14-foot overlap between wings of adjacent aircraft, leaving only 18 inches from wing tip to canopy between aircraft.

From Classroom to Deckplate, DoN Sends Clear Message: Warfighting First!

SECNAV understands the key to effectively getting our nation's energy message to the deckplate involves well-informed leadership. As a result, on 29 August 2011, he announced that beginning this fall, the Naval Postgraduate School (NPS) in Monterey, CA will begin an energy graduate degree program, the first military educational institution to do so. Furthermore, NPS will launch an Executive Energy Series to bring our senior leadership together to discuss energy challenges and solutions for the Navy and Marine Corps. By including energy as a key part of NPS's curriculum, we will be actively molding future 'Energy Warriors.'

Looking Forward

Clearly, recent headlines demonstrate DoN's impressive level of commitment to addressing current energy realities that are far different from those we faced two decades ago when Energy Awareness Month first began. Moreover, DoN will be making even more headlines as we ramp up for the 2012 Green Strike Group demonstration that will include ships and aircraft operating on alternative fuels and utilizing energy efficiency technologies. The Green Strike Group demonstration is in response to one of SECNAV's five energy goals. If you would like to learn more about those goals or follow the Green Strike Group's exciting and challenging journey, visit <http://greenfleet.dodlive.mil>.

Regarding energy awareness and energy efficiencies, we are doing far better than we were two decades ago, and each new positive endeavor strengthens our energy security. We are steadily making headway; we will get there, but until we do, we remain precariously vulnerable to "... fate, chance, kings, and desperate men." (John Donne) ⚓

Rear Admiral Philip H. Cullom
Director, Energy and Environmental Readiness