

# The Art of the Long View

## Highlights from the 2012 Naval Energy Forum

**ON 17 OCTOBER** 2012, the 4th annual Naval Energy Forum took place in Washington, DC. The event brought together a dynamic group of senior military, industry, non-government organization, and Congressional leaders to discuss recent challenges,

energy program, was among the hundreds in attendance.

In her remarks, Senator Shaheen urged the Navy to continue moving forward, citing the connection between energy and national security.

“Energy security...is imperative to the success of today’s military, and it becomes more critical with each passing generation. So let’s be clear: energy security is national security,” said Senator Shaheen.

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We have seen that the biggest changes have come when every Sailor and Marine buys into the idea of energy conservation.

—Ray Mabus, Secretary of the Navy

successes, and the way ahead for achieving the Secretary of the Navy’s energy goals. Presenters shared their perspectives in various energy focus areas including expeditionary, aviation, maritime, shore, international, and industry.

Secretary of the Navy (SECNAV) Ray Mabus, Senator Jeanne Shaheen (D-New Hampshire), Ms. Sharon Burke (Assistant Secretary of Defense for Operational Energy Plans and Programs), and Vice Admiral Philip H. Cullom (Deputy Chief of Naval Operations for Fleet Readiness and Logistics) were among the event’s headliners. Senator John Warner, a staunch supporter of the Navy’s



Secretary of the Navy Ray Mabus gave the keynote address at the forum, highlighting the Department’s progress toward the aggressive energy goals he laid out in 2009.

Katherine Turner

The overarching theme, “The Art of the Long View,” highlighted the importance of using energy in a judicious manner to enhance combat capability and ensure the availability of resources for future generations. Maintaining and increasing operational capabilities and culture change were themes that resonated throughout the various presentations.

SECNAV Ray Mabus emphasized the importance and challenges of change and reminded participants that, “Bold steps are part of our nature as Americans. And it’s part of what makes us a great nation. No one has ever gotten anything big done by being timid. We have seen that the biggest changes have come when every Sailor and Marine buys into the idea of energy conservation.”

Remarks by Ms. Sharon Burke underscored the importance of energy efficiency and the challenges the Navy faces to build a stronger future force. “We can’t pretend energy is a commodity when we need it, where we need it. We have to value it,” she said.

Some key takeaways from the various sessions at this year’s forum are summarized below.

## Expeditionary

Energy efficiency can increase agility and help maintain the competitive edge of the boots-on-the-ground Marine. Technologies such as the Solar Portable Alternative Communications Energy System (SPACES) and the Ground Renewable Expeditionary Energy Network System (GREENS) deployable solar systems, along with rechargeable battery packs enable Marines to meet their energy requirements in the field. Carrying fewer batteries frees up pack space and reduces weight to enable Marines to carry additional ammunition. The Marines have embraced these technologies, and young Marines understand energy efficiency as the new way ahead. Lieutenant General Richard Mills (Deputy Commandant for Combat Development and Integration) explained that, “Energy inefficiency is just simply inconsistent with the Marines’ current and future operational concepts and the environments in which they’re going to have to fight... [we] use fuel efficiency and fuel consciousness to make the force more versatile; have more fight in it, and more ready to respond to threats as they arise.”

## Naval Aviation

Across the naval aviation community, initiatives are underway to reduce energy consumption. Improvements



Senator Shaheen reiterated the need for Navy’s energy initiatives for maintaining energy security and the capability of our military forces.

*Katherine Turner*



Rear Admiral Kevin Slates, Director of the Chief of Naval Operations Energy and Environmental Readiness Division, served as master of ceremonies for the event.

*Katherine Turner*



Marines have used the GREENS system, which generates electricity through solar power, to power command operation centers in Afghanistan.  
*Sgt. Richard Blumenstein*

Energy inefficiency is just simply inconsistent with the Marines' current and future operational concepts and the environments in which they're going to have to fight.

*—Lieutenant General Richard Mills, U.S. Marine Corps*

in naval aviation simulators and modification of fuel use during training flights can reduce fuel demands and achieve major savings. Naval pilots must be fully prepared to operate aircraft at maximum speed and performance parameters, but also use best judgment to conserve fuel when feasible. For this approach to be successful, the organization needs to ensure it has the right policies and technologies in place, makes the appropriate assumptions at the time of acquisition, and has the awareness and willpower to create a culture that accepts these changes.

"We ought to pay attention all the time to how we use those resources so that we aren't wasting, even in a time when we do have the excess capacity," said Vice Admiral (VADM) David Dunaway, Commander of Naval Air Systems Command. "Why burn it if you don't need to?"

### **Maritime Initiatives**

As more powerful shipboard systems come on line, energy saving technologies will be critical for maintaining lower energy profiles and staying within fuel budgets. Maritime energy saving initiatives, such as energy

dashboards, stern flaps, and solid state lighting, can decrease energy consumption and improve combat capability by allowing ships to travel farther on a gallon of fuel. Other maritime programs, such as the Hybrid Electric Drive and the High Efficiency HVAC, are improvements to existing shipboard technologies that help with fleet readiness and also decrease ships' energy consumption. In an anecdote about the USS Makin Island (LHD 8), the Navy's first hybrid electric drive ship, SECNAV explained how providing this platform for Sailors has helped to instill a culture of energy awareness.

“What was really going to count were those young Sailors and Marines buying into this and coming up with their own ideas,” said SECNAV. “This is the future of ship-board energy innovation.”

## Shore

Smart meters have been installed at 90 percent of naval shore installations globally, providing real time data to building users that allows them to identify areas of high energy use and make changes in their everyday activities to conserve energy. These improvements provide installation users with tangible examples of how alternative energy and energy efficiency relates to their everyday lives. By bringing these controls to the user and making energy a part of the conversation, the Navy is creating a culture of energy awareness and savings. Rear Admiral (RDML) Patrick Lorge (Commandant of Naval District Washington and Deputy Commander for Joint Forces Headquarters, National Capital Region) said the shore community “...want[s] to increase that shore energy security; reduce...energy consumption; increase that efficiency; and find ways to inject renewables...and also alternative sources; and provide that reliable energy for that critical infrastructure.”

## Acquisition

The fully burdened cost of energy and the future energy costs of new systems are factors now being considered earlier and more aggressively during the acquisition process. This represents a significant change in how acquisition budgets and contracts have historically been written. VADM William Burke, Deputy Chief of Naval Operations for Warfare Systems (OPNAV N9) used the



Colonel Bob Charette, Director of the U.S. Marine Corps' Expeditionary Energy Office, explained the need to correlate energy efficiency with combat capability.

*Katherine Turner*



Sir Richard Branson, founder of Virgin Group, underscored the importance of the military's steps towards achieving energy independence in a prerecorded video message.

*Katherine Turner*

example of a nuclear submarine to illustrate the concept. A docked nuclear submarine hooks into a shore facility's electrical grid, drawing electricity to power its lights and systems. By ensuring that the most energy efficient systems are installed on the submarine at the acquisitions phase, the system's long-term energy costs will be lower.

support for international navies is maximized, is critical in ensuring mobility and continuity at sea. The U.S. Navy has an opportunity to contribute to the discussion on the international fuel standard, as it demonstrated during the 2012 Rim of the Pacific exercise when an Australian Sea Hawk helicopter was fueled with a 50/50 biofuel/jet fuel blend.

and sense of urgency about ending our dependence on oil. U.S. military and commercial aviation are working together to test and to certify other types of renewable jet fuels." Partnerships between Navy and industry are pivotal to resolving technical hurdles and eventually achieving economies of scale for alternative fuels.

If Americans don't invest in figuring out how to produce renewable fuels at-scale, and then invest in the infrastructure needed to produce billions of gallons, we will be in a world of hurt."

—Mr. Mike Ritzenthaler, Piper Jaffray

VADM Burke went on to discuss the relationship between energy budgets and the maintenance and continuity of the fleet, explaining that energy savings translate directly to operational improvements. "What's the imperative for reducing energy costs? [The Navy] spends almost five billion dollars on fuel each year...it is important to know that the percentage of the cost for us of fuel, relative to the budget, has grown significantly...If we saved just one percent of what we spend on fuel, we could do a significant maintenance availability on a destroyer. If we could save ten percent, we could buy a new Littoral Combat Ship or Mobile Landing Platform."

### International Perspective

The international panel, representing Australia, the North Atlantic Treaty Organization, and Denmark, reiterated the need for change. A takeaway was that global flexibility, where interoperability and compatibility in logistical

"We are very motivated in cooperation...to bring down the cost, and also to get the equipment...because the priority number one for all of us is the security of the single individual that we send out in harm's way," said Lieutenant Colonel Per Lyse Rasmussen, Danish Army, Assistant Defense Attaché at the Danish Embassy.

### Industry Perspective

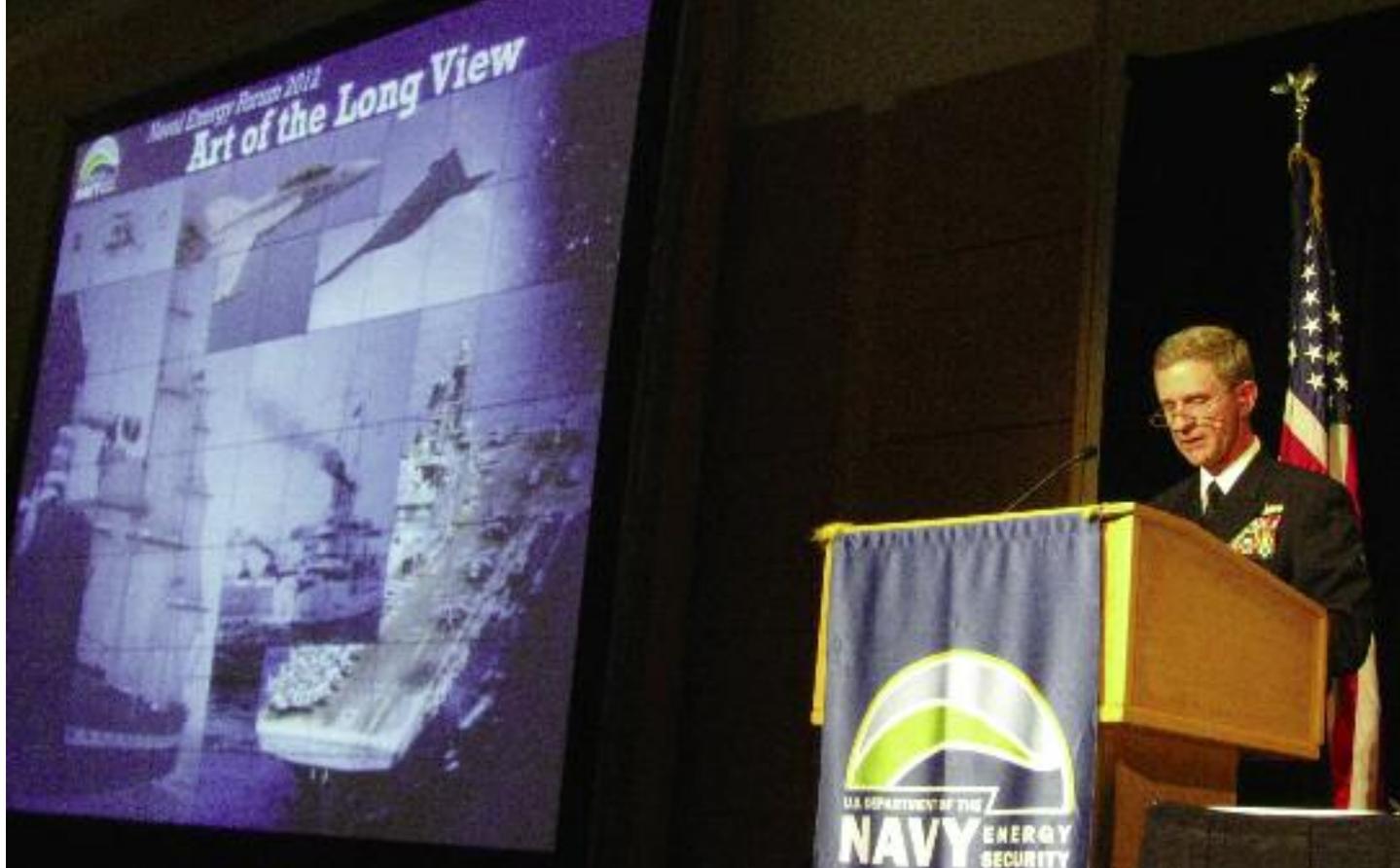
A highlight of the industry panel was a videotaped presentation by Sir Richard Branson, founder of Virgin Group. Mr. Branson expressed the importance of collaboration and the necessity to invest today to enable payoffs in the future. Mr. Branson demonstrated the similarities between his energy vision and the U.S. Navy's, stating that, "We have a shared vision

The panel discussed examples of collaboration among the Navy, industry (including the aviation and shipping industries), and other U.S. government agencies (Department of Energy; Department of Agriculture) to advance the commercialization of biofuels. Panelists stressed



Ms. Sharon Burke, Assistant Secretary of Defense for Operational Energy Plans and Programs, discusses the importance of energy efficiency, renewable energy, and alternative fuels.

Katherine Turner



VADM Philip H. Cullom, Deputy Chief of Naval Operations for Fleet Readiness and Logistics, reminded the audience at the 2012 Naval Energy Forum that to meet the energy security challenges we face, the Navy and the Marine Corps must maintain a vision of the long view.

*Katherine Turner*

## Partnerships between Navy and industry are pivotal to resolving technical hurdles and eventually achieving economies of scale for alternative fuels.

the importance of investing in the future to be able to react to the politics and economics of energy. As panelist Mr. Mike Ritzenthaler, Senior Research Analyst, Piper Jaffray, stated, “If Americans don’t invest in figuring out how to produce renewable fuels at-scale, and then invest in the infrastructure needed to produce billions of gallons, we will be in a world of hurt.”

### Conclusion

In his closing remarks, VADM Cullom reminded the audience that to meet the energy security challenges we face, the Navy and the Marine Corps must maintain a vision of the long view. Enhancing combat capability and using energy in a judicious manner involves changing the way we view energy. If we do that successfully, we can improve operational capabilities across multiple platforms and reduce energy consumption afloat and ashore. VADM Cullom reiter-

ated the Chief of Naval Operations’ sailing directions—war fighting first; operate forward; be ready. He added, “Energy is woven throughout every single piece of that.”

Additional event photos can be found online at [www.facebook.com/navalenergy](http://www.facebook.com/navalenergy). More information about the 2012 Naval Energy Forum can be found online at <http://www.ndia.org/meetings/3600/Pages/default.aspx>. To learn more about the Navy’s energy program, visit [www.greenfleet.dodlive.mil](http://www.greenfleet.dodlive.mil). [↕](#)

*Art of the Long View poster designed by Lacey Olivares.*

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