

Remarks by the Honorable Ray Mabus
Secretary of the Navy
Council on Foreign Relations
New York, NY
Monday, 28 March, 2011

Thank you, Guy Wyser-Pratte, for that great introduction. It is no accident, I think, that my introducer, and as successful a person as Guy, is a Marine. You are never a former Marine. Once a Marine, always a Marine. But he left the Marine Corps as a captain, just as I left the Navy as a lieutenant junior grade.

John Kennedy said one time, he went from being a lieutenant JG to commander in chief with no increase in technical skill. I feel pretty much the same way. So I'm very, very happy to be with you.

Just a little factoid about Marines and how successful they tend to be. Of the Fortune 500 companies, 163 CEOs are Marines. And unlike Guy, very few of them were officers. Most were enlisted Marines.

The only other person I want to point out today is my daughter, Annie, who is here. She is a freshman at NYU.

All you have to do is look at the headlines to see what the Navy and Marine Corps have been doing recently. We are in Japan and off its coast. We are off the coast of Libya. And we have Marines in combat in Afghanistan. Just those three operations involve 35 ships and 45,000 Sailors and Marines. If you also count the other things that are going on on a day-to-day basis around the world, we are doing partnership stations off of South America and Africa and the South Pacific.

We do humanitarian assistance and disaster relief all over the world. The Navy and Marines were the first responders in Japan, in Pakistan earlier this year, in Haiti and in my home state after Katrina. We are the most flexible and the most formidable expeditionary fighting force the world has ever known.

We can take the same equipment, the same people and do very, very different missions. In fact, the carrier Ronald Reagan was headed across the Pacific to do combat air support over Afghanistan when the tsunami -- the earthquake and subsequent tsunami -- struck on March the 11th. Without pausing, it pivoted and became a humanitarian assistance and disaster relief platform, using exactly the same people, using exactly the same equipment that they had been using.

The Essex amphibious ready group was training in Indonesia. They moved to Japan. Another amphibious ready group was in the Arabian Gulf and came around to the Mediterranean where they met up with a different group of Marines from the ones they had brought over,

because the ones they had brought over were in Afghanistan, and they now are in the Mediterranean off the coast of Libya. And it's their Harriers and their Ospreys that have been flying some of the no-fly zone, and who rescued the Air Force pilot whose plane went down for mechanical reasons.

Our submarines and our surface ships have been firing Tomahawks to establish the internationally recognized no-fly zone now.

So we are forward deployed, we're also flexibly deployed. And I think the headlines represent why we need a global fleet, why we need this ability to be able to do everything, from high-end combat, through partnership building, through disaster relief and humanitarian assistance, and why we have to be so flexible, because we simply do not know what the next thing coming over the horizon will be.

Today we face another challenge, one that, unlike so many of things that we do around the world, cannot be won on the battlefield or resolved at sea by the steel of our fleet. It is an issue that has been highlighted yet again by the current turmoil in North Africa and the Middle East. The fragility of the global energy market and the economic and security ramifications to the United States of over-reliance on fossil fuels are challenges that we absolutely must confront.

We would not let the countries we buy fossil fuels from build our ships, our aircraft, our ground vehicles. But by buying the fuel from them, we give them a say on whether those ships sail, whether those aircraft fly, whether those ground vehicles operate.

Additionally, every time the price of oil goes up \$1 a barrel, it costs the Navy \$31 million. So from the first of the year, the price of oil, on average, has gone up \$18 a barrel. Those over a half a billion dollars more we're paying this year for fuel than we had been paying. And in these days of continuing resolutions and very tight budgets, that's half a billion dollars we don't have to buy equipment, to do all the other things that we need to do.

So because of those things, because it's a strategic issue in that we are buying fuel from potentially or actually volatile places on earth, because, as a tactical reason, ships are the most vulnerable when they're being refueled -- the Cole was in Aden to get fuel when it was attacked. And I'm going to talk about the Marines in a minute in terms of their tactics and fuel -- but because of that, a year and a half ago, I set out five energy goals for the Navy and Marine Corps. And we're going to meet these goals, the most important of which is that, by no later than 2020, at least half of all energy that the Navy uses, both afloat and ashore, will come from non-fossil-fuel sources.

Now, we already have a head start. Seventeen percent of our energy today comes from nuclear, because all our carriers, all our submarines are nuclear power. But we are looking at all sorts of other things, and we are making a lot of progress.

We have already flown an FA-18 Hornet on biofuels, on a 50/50 camelina and av-gas mix. We call it the "Green Hornet." And I understand they made a movie about it, or something. It went 1.7 Mach. The engine didn't notice the difference.

We have certified our helicopters on algae-based biofuel. We have certified our swift boats. We are working on our guided missile destroyers and other surface combatants right now.

Ashore, we are looking at and have signed contracts for much, much larger use of solar power. We are looking at geothermal, hydrothermal, wave, solar, wind, anything. We're pretty neutral about what kind of alternate power. We have a few rules. One is, it can't take anything out of food production. Two is, it's got to be a drop in fuel, because we have more than half the ships that we're going to have in 2020 in our fleet today, and more than half the aircraft that we're going to have, today.

And by the way, the Navy has 288 ships in our battle fleet. We have more than 3,600 aircraft. And for a seagoing service, interestingly enough, we have 3.3 million acres of land and 72,500 buildings.

So we're going down one road of alternative fuels. We're going down another, simultaneously, of just being more efficient with the fuels that we use.

We have launched the first hybrid ship, the USS Makin Island. Tom Friedman called it the "Prius of the Seas." It's got an electric drive for speeds of under 12 knots, a regular diesel for speeds of over 12 knots.

In its first voyage -- it was built in my home state of Pascagoula, Mississippi -- in its first voyage from Pascagoula, down around South America, to San Diego, it saved almost \$2 million in fuel cost, and that was at the old fuel prices. At the old fuel prices that were in effect last fall, it was going to save one-quarter of a billion dollars in fuel over the lifetime of that ship.

We're now beginning work to retrofit our other surface combatants with those electric drives.

The Marines, as Marines often do, are leaders in this. The Marines have established two expeditionary Forward Operating Bases, experimental expeditionary Forward Operating Bases, one at Quantico, Virginia, one at Twentynine Palms, California, looking for expeditionary energy, because the thing we import the most into Afghanistan is fuel.

Every 50 convoys, we lose a Marine guarding those convoys, either killed or wounded. And so the Marines tactically know that they have to do something, and they are moving out incredibly rapidly and incredibly well.

They know that fuel to Afghanistan is expensive in so many ways. One is, it's expensive in Marine lives. Two, to just get it there you've got to go across one ocean or the other, put it on a truck, either take it up and then across the Hindu Kush or down through the northern

distribution network in Russia and across the Amu Darya River to get it there. And so it's very expensive by the time it gets to a Marine front-line unit.

And it's expensive because it takes Marines from doing what Marines are supposed to do, what they were sent there to do, which is fight or engage or rebuild.

The very first unit that they put some of this experimental alternate fuel products with, was 3rd Battalion, 5th Marines. 3rd Battalion, 5th Marines went into Afghanistan last fall, and they went to Sangin. That's where some of the heaviest fighting is in Afghanistan.

I went to Sangin at Christmas, and that was the first Forward Operating Base that I stopped at. And when we landed, there was a fight going on, there was a firefight, some number of hundred yards outside the wire. They said 500 yards -- it sounded a little bit closer than that.

But in the midst of this fight, I got briefed by a lieutenant on what they were doing on energy. They've cut their overall fossil fuel use by 20 percent. But much more impressive than that, they've got two combat outposts that use no fossil fuel energy. Their other combat outposts have cut their fossil fuel usage by 90 percent or more.

A foot patrol today uses roll-up, flexible solar panels. They put them in their packs, and they head out on patrol. One hundred eight-two Marines in a company -- in the mid '90s, they would have carried nine radios with those 182 Marines. Today they carry 224. By using those portable roll-up, flexible solar panels and sticking them in their pack, they're saving 700 pounds of batteries. And they're also not having to be resupplied every other day.

So they're out there using solar power, recharging their radios, recharging their GPS, recharging the small electronics that are the source of so much of our combat power today, with no resupply and no fossil fuels.

Those are some of the things that we have been doing, and we're going to create a market for alternative fuels. We're doing it because it makes us better warfighters. We're doing it for strategic reasons; we're doing it for tactical reasons. But overall, we're doing it because energy is fundamentally a national security item.

And it's not just for us. As I have traveled, one of the first things that gets brought up is energy security, because more and more countries are figuring out and are concerned about the fact that energy can be used as a weapon against them.

The second thing that I get asked about when I go out is that even if you have your own supplies of fossil fuel -- because of the President asking me to come up with a long-term restoration plan for the Gulf after the Deepwater Horizon spill -- they know that even if you have reserves, they're getting to be more and more difficult to get at, we're going to deeper water, we're going into places that are more dangerous like the Arctic, and things can go wrong, as they did with Deepwater Horizon, with tremendous environmental and economic results.

I think the Navy can lead, and the military has led over and over again when we have changed technologies. You don't have to look any further than the Internet or flat-screen TVs to see things that the military has done.

The Navy has had a history of leading in energy change. We went from sail to coal in the 1850s. We went from coal to oil in the early part of the 20th century. We went to nuclear in the 1950s. Every single time -- every single time -- there were people who said, you are going to fail, you are trading one very certain form of energy with all the infrastructure that goes with it, for another very uncertain form of energy. And every single time they've been wrong. And they're going to be wrong again.

The federal government uses about 2 percent of all the fossil fuels used in America. DoD uses 90 percent of that. The Navy and Marine Corps use more than one-third of what DoD uses. So the Navy and Marine Corps use about 1 percent of all the fossil fuel used.

To paraphrase the movie *Field of Dreams*, if the Navy comes, they will build it.

We have found two obstacles. One is infrastructure, and one is cost. But if you look at just the small amounts that we are buying today for test purposes, the price of biofuels that we've been buying has come down 50 percent last year; it's on track to be cut in half again this year.

We are working with a lot of people. We're working with the Department of Agriculture. We're working with the Department of Energy. We're working with the Small Business Administration. We're meeting with venture capitalists. We're meeting with private equity firms. Because we are going to create a market.

And I think that it will begin to move us toward a clean energy economy. It will begin to create new jobs here in the U.S. And it will make us better stewards of this planet.

Those are all great things to do. But most importantly, it will make us better Sailors, better Marines, better fighters and better able to defend the vital interests of this country.

So we're doing what we've always done -- innovate, be flexible, take whatever comes over the horizon and be able to deal with it. The Navy and Marine Corps have done that successfully for 235 years. We're going to continue to do it. We will innovate, we will be flexible, and we will come out the other side victorious.

Thank you very much.