

Remarks by the Honorable Ray Mabus  
Secretary of the Navy  
Center for Naval Analysis Earth Day Luncheon  
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Bob [Bob Murray], thank you so much. You know, I have one of the great jobs with the government, maybe the greatest. Senator Warner and I talked about that, and I have a lot of very distinguished predecessors, but Bob Murray was Under Secretary of the Navy. Just to let you know how heavy duty a job that was, two of the previous occupants were Theodore and Franklin Roosevelt.

Perhaps the most distinguished predecessor that I have is John Warner who had this job when he was much younger than I am and did a fabulous job. He went on to become Chairman of the Armed Services Committee in the Senate and he has exhibited leadership all through his life and all through his career.

I just participated in a conference call with reporters and Senator Warner on the Pew Charitable Trust report on what DoD is doing about energy. I want to tell you, that report could not have been done without his leadership, so thank you.

To a couple other folks - Bob Magnus who I got to know in civilian life right after he finished his career as ACMC, Assistant Commandant of the Marine Corps. He and I served on a corporate board together. It was an unusual board in that it had a former Secretary of the Navy, John Lehman, on it, and I left the board to become Secretary of the Navy.

To Sherri Goodwin and all the folks here at CNA, thank you for what you do. Thank you for the rigorous analysis that you put so many issues through. It's such a huge

help to us. And to your Chairwoman, Ambassador Ridgway, thank you for everything that CNA does and means for this country.

And the two people I'm going to introduce who came with me from the Secretariat. Jackalyne Pfannenstiel, who is our new Assistant Secretary of the Navy for Energy, Installations and Environment – E, I, and E. If you could just figure out another I, O ... [laughter] The first 'E,' energy, is new to the title. She brings an impressive and broad background in energy; and Tom Hicks who is head of the Naval Energy Office.

And I just want to thank you all for this opportunity. The final group that I want to thank is the Military Advisory Board. Thank you, number one, for your service to this country in uniform and now for your service to this country as part of the Military Advisory Board. I said going into lunch that it's a little exaggeration, but not much, that when we sat down to come up with energy ideas and energy goals for the Navy we just basically took your report and put it on different letterhead and said, these are our goals. Your work is that good and it's having a major impact.

America and our military in particular use too many fossil fuels. We get them from potentially volatile places on earth. They are places that are vulnerable to supply shocks and price shocks. We would not let the countries that we buy energy from build our war ships. We would not let those countries provide arms to our Marines. But yet we are willing to be dependent on those countries to power those warships, to provide the energy for those Marines. We simply have to begin to move off of this dependency on particularly foreign sources of energy, but also on fossil fuels themselves.

I think as this debate unfolds about things like climate change, things like the effect of fossil fuels on America and on the world, that if we make this debate one of

energy independence for America, and national security for America and for our armed forces, it is a debate that we are going to win. It's a debate that the American people can unify behind. I think our chances are less certain if we base it on what to most people are a little more nebulous ideas like climate change – harder to see, harder to understand and harder to qualify.

This Administration, starting with the President in his Nobel acceptance speech, talked about the need for energy independence and energy security. He's talked about it several times, but Copenhagen was his most expansive remarks on it. He talked about how it's not just about things like climate change. It's about security, it's about the economy and it's about the future.

So building on that, we've set five goals for the Navy and Marine Corps to reach. The most overarching of which is that by 2020 – 10 years from now, one decade - half the energy used in the Navy and Marine Corps, both ashore and afloat, is going to come from non-fossil fuel sources. Now, the Navy starts with an advantage - we're already at 17 percent of our energy from nuclear power. All our submarines and all our carriers are nuclear powered, but we're going to step that up considerable.

Some of the other goals are that by 2020 at least half of our bases will be net-zero in terms of energy consumption. They will make at least as much energy as they use. We already have one base today, China Lake in California that thanks to geothermal energy already produces more energy than it uses and puts that excess energy out to the local grid in the local community.

We have in the Navy and the Marine Corps 4.4 million acres, 72,500 buildings, 286 ships in our battle fleet and 3,800 aircraft. The federal government uses 2 percent of

all the energy America uses. The Department of Defense uses 90 percent of all the energy the federal government uses. The Navy uses a third of all the energy DoD uses. The demand is huge.

We have, as part of our number thing, 50,000 non-combat vehicles that turn over about every five years; these are the cars and trucks and things that haul stuff around our bases. Just by changing the type of vehicle we buy and going more electrical, more hybrid, more flex-fuel, we're going to reduce the amount of fossil fuels that those burn in half in five years by changing what we're doing with that fleet.

In 2016 we're going to deploy the Great Green Fleet which is going to be a Carrier Strike Group. Carrier Strike Groups are pretty impressive things – an aircraft carrier, surface ships that form the screen and other big ships that are out there with it that will use no fossil fuels at all.

We just had the first successful test a week ago, on the actual Earth Day, at Patuxent River Naval Air Station in Maryland, the FA/18 Hornet flying on a mixture of regular aviation gas and biofuels - the Green Hornet. Those of you who laughed are of a certain age because those of you who are too young today don't remember the Green Hornet – the radio show and the comic book. But our Green Hornet flew supersonic a week ago today going 1.2 Mach. It flew on camelina, which is a seed from the mustard family that is not a food source. It can be used in rotation with wheat and it can be grown in all 50 states of this union. It doesn't take things out of the food supply; it actually helps the land that it is grown on be more productive. The Green Hornet, the FA/18, and its engines did not know the difference between regular aviation gas and camelina.

Which brings me to one other thing that this initiative will do - it will help not only our military, not only our security, not only our national interests, it will help American farmers. Second and third generation biofuel research is being done. We're looking into things like camelina, but also things like algae for third generation biofuel. We're looking at biomass to use things like wheat stalks whenever the wheat's been harvested, been cut down, instead of plowing it back under, use that for energy. We're looking at trash that new technology it can burn very cleanly, with no harm to the atmosphere, no release of bad gases into the atmosphere.

I signed a MoU with the Department of Agriculture, Secretary Vilsack. And we had a Marine Light Armored Vehicle there that we brought up from Quantico, on the interstate by the way, it drove up using biofuels. We had it as a backdrop for the press conference. Secretary Vilsack says he's never going to have a press conference again without a large weapon. He never got bad questions.

We had our first meeting and our first project on this in Hawaii. Secretary Pfannenstiel was there; we had 250 people attend. We picked Hawaii because of the large Navy and Marine presence, because the farmers in Hawaii are having issues because sugarcane is gone and they don't have another crop, and because Hawaii is the most dependent state on imported oil that we have - over 90 percent of their energy comes from imported oil. We're going to make some progress in Hawaii in terms of the Navy, the Marine Corps, Hawaii farmers and weaning Hawaii off of imported fuel.

The last thing that we are going to do in our goals is we're beginning to change the way we contract. Not only are we going to look at how much a weapon system, ship or airplane should cost, we're going to look at the total lifecycle cost of that ship, that

airplane or that weapon system, and that's going to be part of the contract. But we're also going to look at how the manufacture uses energy. The smaller the carbon footprint, the better that manufacturer is going to be in those competitions. So we're trying to reach out and not only touch the Navy and Marine Corps, but also touch those manufacturers from which we buy so much.

Strategically we have to do this because of where this energy is coming from, because of our vulnerability. Tactically it makes us better fighters. Every time you cut a ship loose from an oiler, that ship becomes more flexible. And the example that I talked about a little bit at lunch, the two things that we send into Afghanistan more than anything else are fuel and water. Now to get either one of those there, you have to take it across the Pacific, put it on a truck, take it up through the Hindu Kush and into Afghanistan. When you do that you have to have Marines guarding these convoys all the time. It is a dangerous job, and we lose Marines and we have wounded Marines in these convoys. And we're taking Marines away from what Marines were sent there to do which is fight and engage the local population and help rebuild that country. So every time we can reduce the amount or change the type of energy, we help those Marines be better war fighters.

Just a little water example, we now have eight solar powered water purifiers in Afghanistan – they're working fine. There are two things we can do. One is change the type of energy – go to solar, go to wind, go to things that can be done onsite instead of being trucked in. The second thing is to be more efficient with the energy we do have. The Marines are doing things like using spray on insulation on their tents which is a huge

energy saver and it's making them better war fighters. It's making us more independent as a country.

I can give you example after example after example of things that are going on across the Navy and across the Marine Corps, but I think that the most important thing is that the Navy and Marine Corps are embracing this change. The Navy has always led in the change to new types of energy. In the 1850s from sail to coal, in the early 20th century from coal to oil, and in the 1950s embracing nuclear power as a way to propel our submarines and carriers. Every single time that this was done, there have been naysayers and there have been doubters. When we move from one source of energy to another, the story has always been the same, you're moving from a proven source of energy that we know how to use to an unproven, more expensive and less reliable type of energy. We don't have the infrastructure. When we gave up coal to move to oil, we simultaneously gave up coaling stations all around the world. When we went to nuclear, what about safety - surely you don't want to put Sailors on ships with nuclear reactors. Every time, every single time, these naysayers have been wrong, and we have been a better Navy and better war fighters because of it. And I'm absolutely confident that's going to be the case now.

Every one of the goals, all five of them, are very ambitious. Every one of them is going to take a lot of work, a lot of effort and a lot of teaching in order to get there. But as far as I know, the Navy and Marine Corps have never backed down from a challenge. The Navy and Marine Corps have always shown that they can lead not only the military, but they can lead this country.

And I think if the Navy provides enough demand for things like alternative fuels, the two obstacles that we've identified – price and lack of infrastructure for some of these types of fuels – are going to disappear. Price is going to come down and to flip a line from *Field of Dreams*, if the Navy comes, they will build it. They will build the infrastructure; we know it's going to happen if there's a business case for it and if there's a customer out there demanding it, we know the private sector is going to be there to meet that. And if the military sets the demand - and I'm proud of what the Navy and Marine Corps are doing, but it's not just the Navy and Marine Corps, the Army, the Air Force and the Coast Guard are all doing lots of things in this energy area. If that signal is strong enough, the private sector will follow.

I'm going to stop so I can take some questions, but I want to finish where I started, by thanking you for all the work that you do to give us the intellectual underpinning and practical ways to do a lot of these things. And to say that the people of the United States Navy, Sailors and Marines, I have absolute confidence that they can do any job or fulfill any task completely. Energy is no different. We have the finest expeditionary fighting force in the world, that the world has ever seen, and that's the United States Navy and the United States Marine Corps. And thanks to a lot of the work you do, thanks to some of these initiatives, we are going to continue to be the premier expeditionary fighting force the world has ever seen.

Thank you.