

Environmental Outlook: The Military and Alternative Energy

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Transcript:

MS. DIANE REHM

Thanks for joining us, I'm Diane Rehm. The military is powering ships with fuel derived from algae-running solar-powered generators and flying jets with fuel made from an oilseed plant. The military says cutting down on oil makes our troops safer. But for now those alternative fuel sources are more expensive than traditional ones. The hope is that a customer the size of the military will create demand and drive prices down.

MS. DIANE REHM

As part of our environmental outlook series, we talk about these efforts. First joining me in the studio is Navy Secretary Ray Mabus, good morning to you sir, thanks for being here.

SECRETARY RAY MABUS

Diane good morning to you, thank you for having me.

REHM

Talk about the scope of the military's interest in renewable energy.

MABUS

Well as you said in that introduction we look at energy as a national security thing. We look at it strategically because we're buying too much energy from too many places that are either potentially or actually volatile. Secondly, we look at it tactically because every convoy of fuel that we take into Afghanistan is costly in a lot of ways. The fuel is very costly. But also for every 50 convoys we lose a Marine, either killed or wounded.

MABUS

You look at it tactically from, you've got Marines out there that if they carry solar blankets they can power their radios and GPSs instead of lugging pounds and pounds of batteries and having to be resupplied. So we're looking at it all across the Navy and Marine Corps. And our goal, which we're going to meet, is that by no later than 2020 at least half of all our energy both afloat and ashore will come from non-fossil fuel sources.

REHM

But now give me a comparison of cost between non-fossil fuels and what we're too often using now.

MABUS

Well, I will give you a couple of comparisons. One is in terms of our bases, even though we're a seagoing service and an expeditionary service we have 3.3 million acres of land and 72,500 buildings in the Navy and Marine Corps. We're doing solar there, we're doing wave, we're doing hydrothermal, we're doing geothermal. The payback is pretty quick on those sorts of projects.

MABUS

In fact over the next five years everything we're doing in energy is going to pay for itself. So that payback is very quick. On the bio-fuels, they are more expensive right now but the more we buy the more that cost comes down. And, for example, last year because just on test amounts that we were buying the price was cut in half, we expect the price to be cut in half again this year on bio-fuels. Now it will still be more expensive than oil and gas is today but we've noticed in the last couple of months, oil and gas, pretty volatile itself in terms of its price.

MABUS

But we think that if we bring a market, if the U.S. military brings the market, and we do use about 2 percent of all the fossil fuels used in the United States, that's by far the largest single user. That if we establish the market, the price is going to begin to come down.

MABUS

I'll give you one more thing. The president charged the Department of Energy, the Department of Agriculture and Navy to come up with a commercially-viable bio-fuels industry and we're well on the way to doing that. And I think you'll see an announcement relatively soon on that. but commercially-viable means that it's got to be competitive on cost.

REHM

Ray Mabus is Secretary of the Navy. I must say I would wonder whether you'll be able to persuade the Congress that right now is the time to be spending more money on these alternative fuels even though in the long run they would pay off. Right now the Congress is in such heated negotiations with the administration. How do you see that going?

MABUS

Well, for one thing, doing this makes us better war fighters. That's the main reason we're doing it. Secondly, it's going to save money in terms of getting fuel to Afghanistan for example. And not only is it going to save money, it's going to save the lives of Marines, of soldiers, of airmen

and Sailors. And I think you can show that the more we buy, the more the cost comes down and that if we can do these things inside the current budget then we -- this is an imperative force. This isn't something we need to do because we'd like to do it, but one of the things you do in the military is you look for areas of vulnerability in your enemies or your potential enemies or your potential adversaries and you look for vulnerabilities in yourself.

MABUS

Our biggest vulnerability in the military right now, one of our biggest vulnerabilities is in energy and in how we get it, how we use it.

REHM

Tell me about the Green Hornet.

MABUS

The Green Hornet is an F-18, which is known as the Hornet, that is flying on a mixture of bio-fuels and aviation gas a 50/50 mixture. It's gone 1.7 times the speed of sound. The airplane didn't notice a difference. It's flying on a bio-fuel made of camelina which is a member of the mustard family. It's inedible. You put it in rotation with other crops, because one of the --we have several requirements for bio-fuels. One is that it be a drop-in fuel. We've got the planes, we've got the ships that we're going to have for the next few years and so it's got to just replace oil and gas. You can't have to have new engines or change the engines.

MABUS

Second is, it shouldn't take any food out of production, because we don't want to have a competition between bio-fuel and food. And third is, it's got to be done in the U.S. because we don't want to trade reliance on foreign sources of fossil fuels for reliance on foreign sources of other fuels. And along these lines, right now we've got the largest request for proposals out ever for bio-fuels, 100,000 gallons of aviation gas and 350,000 gallons of maritime bio-fuels.

MABUS

That translates into 10,700 barrels. That's the biggest RFP that DoD has ever put out and I think it's probably the biggest RFP that's ever been put out. And so as we are creating this market, again, you're going to see prices and you are seeing prices come down pretty dramatically.

REHM

And what about solar energy, how widespread?

MABUS

We are -- right now we have plans for 100 megawatts of solar on our bases. That's enough power to power a city the size of Norfolk, Va. And that's what we've got planned right now. By 2020 we also have a goal that at least half our bases will be net zero. So they will produce at least as much energy as they use. We've got one base right now, China Lake in California that produces more energy than it uses, so it gives energy back to the grid.

REHM

So you're saying with the defense appropriations that you have right now, you can move forward with this plan without having to draw down because of the cost imbalance?

MABUS

Right. Now, we're doing research and development on things like bio-fuels and they're costing more, but they're in small quantities and it is for R&D. But as you ramp that up to commercial, it has to be competitive in terms of price for us to buy the amounts that we're going to need to buy.

REHM

You also mentioned the Navy and the Marines. What about the Army? To what extent has it moved in to cooperate?

MABUS

Well, I mean, obviously I think that the Navy and the Marines are out front because I'm the Navy's secretary. But all the services, the Air Force has been a leader in terms of jet fuel for use in its planes. The Army is beginning to do things on its bases and looking at different types of fuels for a lot of its combat vehicles. And defense contractors are also beginning to come forward in terms of putting different types of systems in front of us designed to use less energy.

MABUS

One of the things that we're looking at in the Navy and one of the things I know that DoD-wide we're beginning to look at, is the use of energy as a factor in our procurement. So if you buy a system, how much is that system going to cost to use over the whole lifetime of the system, not just how much is the procurement price. And energy has got to be a big factor in that.

REHM

And you've also said that you'd like to demonstrate a green carrier strike force.

MABUS

We're going to demonstrate the great green fleet, which is a carrier strike group, next year in 2012, and that's what the RFP is for. That's the 100,000 gallons of aviation fuel, 350,000 gallons of surface fuel. We've already got a head start. All our carriers, all our submarines are nuclear, so we're already using alternative fuels for them. What we're going to do is use alternative fuels for all the rest of the surface ships in the group and the aircraft.

REHM

Well I want to congratulate you and wish you all the best. I'm sure there are a great many companies out there hoping you will proceed as you have planned. Secretary of the Navy Ray Mabus, thank you so much for being here.

MABUS

Diane, thank you for having me.