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Japan, the Pentagon, and the Future of Renewable Energy: Battle Lines Form
日本、ペンタゴン、再生可能エネルギーの将来––戦陣
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Andrew DeWit

Over the past year, the idea that Japan can and should turn rapidly to renewable energy has gone from minority opinion to common sense. We are clearly watching a revolution unfold, but Japan—and not only Japan—should never forget that this is not a solitary run but a race whose prizes include economic development, jobs, and averting global warming. We usually think of the renewable competition as China or Germany, but surprisingly it also includes the US Air Force, the Navy, and the Department of Energy as well as major US corporations. The US Environmental Protection Agency's 1300 member list of Green Power Partners includes US firms such as Intel, which gets 88% of its electricity from renewables, and US municipalities like Austin Texas, which gets 100% of its electricity from green power. The members are ranked by total volume of renewable power used annually. On this basis, the Air Force is 16th. It has 131 renewable projects in operation on 56 bases, with 50 more projects under construction. These projects include solar PV, solar thermal, geothermal heat pumps, wind, landfill gas, and others. The US Air Force plans to raise their current 3% renewable-power rate (roughly equal to Japan's) to 27% by 2016.

The recently announced Obama budget indicates that the White House is accelerating its own cooperation with the US military to achieve energy industrial policy goals, a policy that began early in the Bush Administration years. The Republicans think they see their chance to throw a wrench in the works. They recently decided to open congressional hearings to try, through focusing on Navy Secretary Ray Mabus, to put a political face on the issue and reduce the US military's longstanding and massive renewable initiatives to a "Solyndra"-style plot by the Obama people to reward powerful friends with lucrative contracts.

The Republicans are likely stepping into a minefield. This is because the Pentagon's concern about energy has its own trajectory, rooted in Iraq and other recent battlefield experiences as well as the increasing electrification of the soldier in the field and the global network of bases. Among the greenest Americans are the Marines at forward bases in Afghanistan, who charge their roughly 7 kilogrammes of batteries per soldier with Ground Renewable Expeditionary Energy Systems (GREENS), "a portable 300-watt hybrid battery generator that uses the sun to produce electric currents."

That green approach may not make sense to fossil-fuel industry shills who sit in comfy chairs in Congress or write op-eds for the Heartland Institute. But it makes sense to Marines who don't want to die humping fuel (over 50% of supply logistics) to power electric generators. The US Army's calculations show that for every 24 fuel convoys in Afghanistan, one soldier or Marine gets killed.

The Republican Party is not the only group to confront a dilemma over military leadership of a renewable energy revolution. Thus far, progressives, who are likely to support the drive to replace oil and coal with renewable carbon-free energies but oppose lashing these developments to American war making, have remained silent.

The military have a compelling interest in energy alternatives because it wants to reduce casualties, reduce costs, and draw down supply lines as it faces multiple wars. But their ambitions are even larger. They want to lead an energy revolution that they see as being in the national interest.

Example of a 1-megawatt "microgrid" currently in use by the US Army

As Navy Secretary Mabus argues, there are multiple strategic reasons for the military to spearhead the transition from fossil fuels to alternative energy. And it has done this before, as when the navy led the shift from wind power (think sails) to coal, then from coal to oil, and then from oil to nuclear. The US Navy aims at 50% renewables by 2020, and it is making significant strides to get there. It has an interim plan to have "Great Green Fleet" running on biofuels – sustainable biofuels, not corn-based craziness – by 2016.

Is all this unrealistic? The track record suggest not, as the military generally has been the point of origin for the computer, GPS, the internet and many other technological revolutions that continue to shape business as well as daily life.

So to a large extent, the Obama people have followed the Pentagon's lead because having the military go for renewables is like trooping behind Nixon on the way to China. And bright lights on the right have not opposed the military's initiatives because they either support them (as in the case of former Republican Senator John Warner) or they don't want to open a door they might not be able to shut. There's only a downside for a GOP leadership that allies itself with vested energy interests and astroturfed "energy citizens" versus a military that knows renewables save lives and money and is gearing up to deal with climate change, resource conflict, and even the need for sustainability in agriculture and nutrition.

In the end, this debate comes down to a very easily understood, clear-cut example in which young men and women either die for conventional fuel or don't because they have renewable ways to generate power. The Obama administration, burned badly on its earlier attempts to promote renewable energy, appears to have learned an important political lesson: let the military tell the story, as it's the most trusted institution in American politics, according to Gallup, with 78% of Americans placing a great deal or quite a lot of trust in it. Congress, on the other hand, ranks last, even below health maintenance organizations. One suspects that oil companies would rank lower yet.

Japan wasn't even in the running in this renewable race before the Fukushima Shock. Japan's nuclear-village deemed 10% renewables by 2020 as unrealistic. They were content with a renewable energy target of 1.63% by 2014. They still hold sway in a lot of committees and among the big banks and Keidanren, the same institutions that brought 20 lost years coddling zombies after the bubble's collapse in the early 1990s. But local governments, credit unions, SMEs, NGOs and popular opinion are pushing hard not only to block continued reliance on nuclear power but to ramp up the role of renewables. And they're scoring successes even at the level of the central government. The February 15 Mainichi newspaper revealed that Nippon Steel Executive VP Shindo Kosei was removed from the feed-in tariff (FIT) price-setting committee member list to be submitted to the Diet.

That means the important 5-member committee charged with setting the terms for renewable energy will have a majority who are real experts and thus know what the FIT has done to facilitate renewable energy in Germany and can do for Japan. The US military itself has FIT-like policies in place, including 20-year power contracts to provide a stable guarantee of the market. Japan's revision of the membership of the FIT committee clearly signals a shift in power-relations and industrial-policy calculations. The flood of renewable projects nation-wide, by households, local governments, co-ops, and businesses big and small, is likely to accelerate even more.

What's underway at present is an industrial revolution encompassing energy, IT and biotech (e.g., in sustainable biofuels such as the seaweed-based drop-in fuels the US Navy is nurturing). That's at least 20% of the economy, more than enough to drive a sustainable recovery with good jobs and greater equity. If the US military leads the revolution, the benefits are likely to be concentrated among the big firms it does business with. But if democratic states like Japan and Germany can grow green very fast, then the possibility opens of coping with climate change, energy and water resource constraints, and socioeconomic inequity in one focused round of smart industrial-fiscal policy. In this light, the 3.11 earthquake, tsunami nuclear reactor meltdown disaster might be viewed as opening the way for a new energy regime in Japan and beyond. It's hard to overstate the global significance of what Japan does on energy policy over the next few weeks and months.

Andrew DeWit is Professor of the Political Economy of Public Finance, Rikkyo University and an Asia-Pacific Journal *coordinator. With Kaneko Masaru, he is the coauthor of* Global Financial Crisis *published by Iwanami.*

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