

## U.S. ARMY TO USE SOLAR BACKPACKS IN AFGHANISTAN



The U.S. military is increasingly embracing renewable energy, whether it be utilizing biofuel in the Air Force or creating tanks that can run on hydrogen fuel cells. In its most recent effort, the U.S. Army has decided to utilize solar energy in Afghanistan — no doubt due to the high levels of sunlight, but also due to the problems of supplying troops with batteries for equipment in combat zones.

Developed by the U.S. Army Research, Development and Engineering Command's communications-electronics center, the portable solar system is known as

the Rucksack Enhanced Portable Power System REPPS and features a 62-Watt solar panel “blanket” tucked into a backpack. The equipment was reportedly deployed to Afghanistan this summer. In the past, the Marines and the Air Force developed similar systems for their troops — the Marines created solar panels that fold into en suitcase-like unit for easy transportation, while the Air Force contracted Lockheed Martin to outfit shipping containers as portable solar power units.

While addressing the problem of supplying power to troops and bases in the field, the solar backpacks also aim to cut the cost of



supplying fossil fuels to remote combat zones. As you'd expect, military equipment such as GPS units and radios demand a lot of energy, and as such having a renewable and sustainable source of power is of immense benefit to troops.

What makes the REPPS even more convenient to troops is its weight. At only ten pounds, the REPPS is light enough for troops to carry easily, and the flexible 62-watt solar blanket easily recharges batteries in a matter of hours. Military electronic devices can also be hooked up to the solar blanket to provide them with more power, and the REPPS is able to convert AC to DC with a number of adapters that can be plugged into walls, vehicles (through the cigarette lighter) and even disposable batteries.

Currently it is only the 173<sup>rd</sup> Airborne Brigade Combat Team based in Logar, Afghanistan that have the REPPS, but if the system stands up to the test of field use it is possible that more units will get them in the future.

## U.S. MILITARY AIMS TO USE 50 PERCENT RENEWABLE ENERGY WITHIN TEN YEARS

Of all places, the U.S. military has proven one of the fiercest proponents of renewable energy, and for totally practical reasons — most importantly cost and safety. Now, military higher-ups plan to rely on renewable energy sources for 50 percent of their power by 2020, which could help the worldwide advancement of those technologies immeasurably. One company of Marines, saddled with tons of solar power tech, is kick starting this revolution.



*Solar Panel in Afghanistan (bron: Major Paul Greenberg/U.S.M.C.)*

The military is not a new player on the renewable energy scene; the Navy has previously pledged to have a ‘Gren Strike Group’ by 2012, was the biggest purchaser of electric cars in the country, and is working on “zero-footprint” camps. These aren't ideological choices—renewable energy and many of its applications are simply better than fossil fuels in many ways.

Says Ray Mabus, secretary of the Navy: “Fossil fuel is the number-one thing we import to Afghanistan, and guarding that fuel is keeping the troops from doing what they were sent there to do, to fight or engage local people.” The convoys that deliver fossil fuel are frequent targets of insurgent attack, which can impair both the delivery system and the lives of civilians and soldiers—a study found that roughly one civilian or soldier is killed for every 24 fuel convoys sent. And given that fuel often makes up, 30 to 80 percent of every convoy's load, according to the New York Times, that's a lot of danger.

The reason renewable sources have been slow to take hold is largely for their high cost of production—a certain amount of solar energy is far more expensive to produce than the same amount of energy from fossil fuels. But given the astronomically high prices of transport for fossil fuels, solar energy, for one, doesn't seem so pricey. Solar energy

may be more expensive to produce, but carting around solar panels is far less dangerous and expensive than repeatedly shipping fossil fuels around the world.

The 150 Marines of Company I, Third Battalion, Fifth Marines, which set off from California last week, are the first to bring renewable energy tech to a battle zone. That tech includes portable solar panels, solar chargers, and solar tents. The military clearly hopes this venture will serve as a model for the future—Mabus said that he's pushing for the military to rely on 50 percent renewable energy by 2020. And with the military pushing so hard for new innovations in the field, the results will eventually drift down to us civilians. Hopefully these efforts can kickstart renewable energy—if it's good enough for the Army, Navy, Air Force, and Marines, it's surely good enough for your office.