ENLISTING THE SUN

POWERING THE U.S. MILITARY WITH SOLAR ENERGY

Background

In recent years, the Navy, Army and Air Force have outlined ambitious renewable energy targets that will drive 3 gigawatts (GW) of renewable energy installations by 2025.[1]

These aggressive renewable energy targets respond to rising energy costs, potential energy supply disruptions and the need for more secure and clean energy generation and distribution. In the past year alone, the DOD spent more than $20 billion on energy and consumed over five billion gallons of oil.[2] An aging national transmission network, global fuel price market volatility and a dependence on foreign oil continue to put mission-critical energy supply at risk.

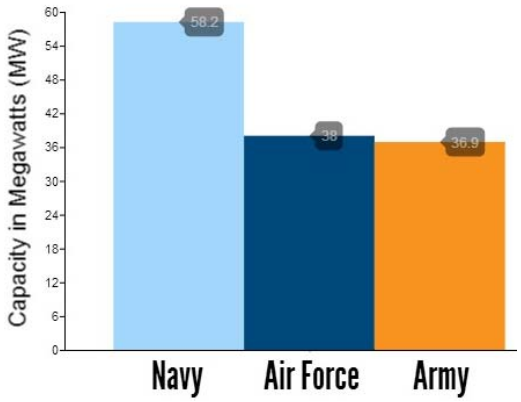
The military has increasingly turned to solar energy to meet its renewables targets. Solar has proven an effective alternative to traditional energy sources in a variety of roles for the DOD.

Solar Is Growing in the Navy, Army and Air Force

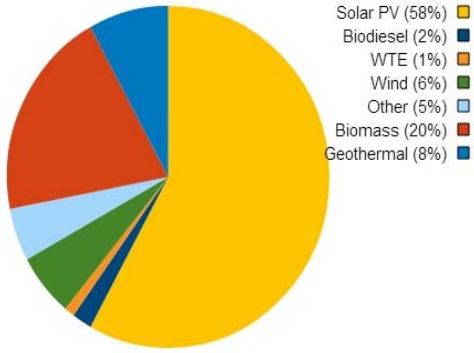
There are more than 130 megawatts (MW) of solar photovoltaic (PV) energy systems powering Navy, Army and Air Force bases in at least 31 states and the District of Columbia. Combined, these installations provide enough clean energy to power 22,000 American homes.[3]

In addition, PV is 58 percent of the 1.9 GW of identified DOD renewable energy capacity additions from 2012 to 2017. This amounts to approximately 1.1 GW of new PV projects, roughly equal to the amount of installed global solar capacity in 2000.[4]

Installed Solar Capacity by Branch



Planned DOD-Wide Renewable Energy Capacity Additions 2012-2017



Source: FY2011 DOD Annual Energy Management Report

[1] http://www.whitehouse.gov/the-press-office/2012/04/11/fact-sheet-obama-administration-announces-additional-steps-increase-ener. These targets are designed to help meet a wider DOD mandate, which requires 25 percent of total facility energy consumption to come from renewable energy sources by 2025. *See* 10 U.S.C. Section 2911.

[2] http://www.defense.gov/news/newsarticle.aspx?id=117084

[3] These solar totals do not include installations at bases abroad, on the battlefield or at any classified locations.

[4] Annual Energy Management Report www.acq.osd.mil/ie/energy/library/FY.2011.AEMR.PDF

NAVY

- As of early 2013, there are more than 58 MW of solar PV operating at DON installations in 12 states and the District of Columbia
- By 2020, the Navy expects to obtain 50 percent of its energy from renewable sources
- The Navy has also awarded more than 20 MW of PV projects

AIR FORCE

- As of early 2013, there are 38 MW of solar PV capacity operating at Air Force bases in 24 states
- PV will comprise 70 percent of new Air Force renewable energy capacity added from 2012 to 2017[5]
- The Air Force has plans to add more than 26 MW of PV in 2013 alone

"The [solar] system works amazing. By saving fuel for generators, it has cut back on the number of convoys, meaning fewer opportunities for one of our vehicles to hit an IED."

- Marine Sgt. David Doty (pictured below)

ARMY

- As of early 2013, there are more than 36 MW of solar PV installed at Army bases in at least 16 states
- Solar comprises a third of the Army's planned renewable generating capacity from 2012 to 2017[6]
- The Army has plans for 55 MW of additional solar projects on military bases as well as 13 MW of solar on the roofs of 4,700 military homes at Fort Bliss in Texas

Solar Helps Protect Military Personnel on the Battlefield

In addition to energy on military bases, solar also provides the military with operational energy that enhances the "tactical edge" and security of our armed forces abroad.[6]

Photo: Gunnery Sgt. William Price

The military has utilized portable solar arrays to power "fixed-site" locations, many of which are very remote and depend on off-grid power. Solar reduces demand for traditional generators at these discreet locations and, in turn, limits the need for costly and dangerous fuel resupply missions that put personnel at risk.

Operational solar also provides these bases with dependable power that is easily portable, compared to obtrusive, heavy, and, at times, unreliable generators that are often targets for enemy fire.

[5] *Id.*
[6] *Id.*