

# Navy Closing in on One Gigawatt of Renewable Energy

## An Important Step Towards Achieving the DON's Consumption Goal from Alternative Energy Sources

**THE RENEWABLE ENERGY** Program Office (REPO) led the Department of the Navy's (DON) efforts to produce or procure one gigawatt (GW) of renewable energy generation capacity by the end of 2015—an important first step towards meeting the Navy's overall goal of 50 percent of total energy consumption coming from alternative sources by 2020.

Secretary of the Navy (SECNAV) Ray Mabus established REPO to oversee efforts across the DON in support of this energy goal. While the construction and deployment of renewable energy benefits the environment, the motivation for the renewable energy strategy is primarily to enhance energy security and better support warfighters. "By establishing these sources of renewable energy, we ensure both energy independence and cost savings well into the future,"

said Secretary Ray Mabus when announcing an agreement to add solar panels to DON housing in the San Diego area.

### Chartering the Renewable Energy Program Office

In May 2014, Secretary Mabus chartered REPO to identify cost-effective renewable energy projects to be built on or off-base to benefit DON installations. Led by Executive Director Robert Griffin, REPO is the central management office for execution oversight, and works closely with Commander Navy Installations Command, Naval Facilities Engineering Command, Marine Corps Installations Command (MCICOM), regional Facilities Engineering Commands, MCICOM Regional Commands, Installation Commanders and the broader DON community to develop renewable energy projects.

To meet SECNAV's goals, REPO has three development models that leverage third-party financing to develop cost-effective, large-scale projects that will increase the DON's energy security:

#### ■ Model 1

The Navy procures and consumes energy produced by an off-base generation facility under a Utilities Energy Services Contract or using long-term authority (via contracts for energy or fuel for military installations as per U.S.C. § 2922a) for up to 30 years.

#### ■ Model 2

The Navy provides land on-base for the development of a renewable energy generation facility that connects to the existing off-base electrical distribution system. The utility provider or private developer is responsible

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—Secretary of the Navy Ray Mabus

for the design, construction and operation of the renewable energy supply system under a real estate outgrant. In exchange for use of the land, the Navy receives in-kind consideration equal to the value of the land in the form of energy security benefits (electrical infrastructure upgrades, new feeder lines, etc.).

■ **Model 3**

The Navy works with a third-party to develop a source of renewable energy on-base to supply the energy needs of the installation. The renewable energy generation asset and transmission system are designed and constructed by a utility provider or private developer, and are connected to the installation's existing electrical transmission infrastructure for on-base energy usage. This process involves both a real estate outgrant for use of the land and a long-term energy contract with the provider.

For more information about REPO, visit <http://greenfleet.dodlive.mil/energy/repo>.



Procuring one GW of renewable energy is an important milestone in meeting the Navy's overall goal of 50 percent of total energy consumption coming from alternative sources by 2020, one of five goals outlined in the DON's 2012 Strategy for Renewable Energy. (From the 1 Gigawatt Task Force, see "A Strategy for Renewable Energy—Meeting Secretary Mabus" Energy Goals for Installations. For a copy of the strategy, contact the Office of the Deputy Assistant Secretary of the Navy (Energy). For more information on the DON's energy program, visit <http://greenfleet.dodlive.mil>.)

Over the past year and a half, REPO has had a laser-focus on achieving the goal of procuring one GW of renewable energy generation capacity by the end of 2015, which has involved frequent working group meetings, conferences, and consultations with industry, coordination with other Federal agencies, and employing lessons learned from recent and ongoing energy projects.

## Renewable Energy: What It Is & How to Get a Gigawatt

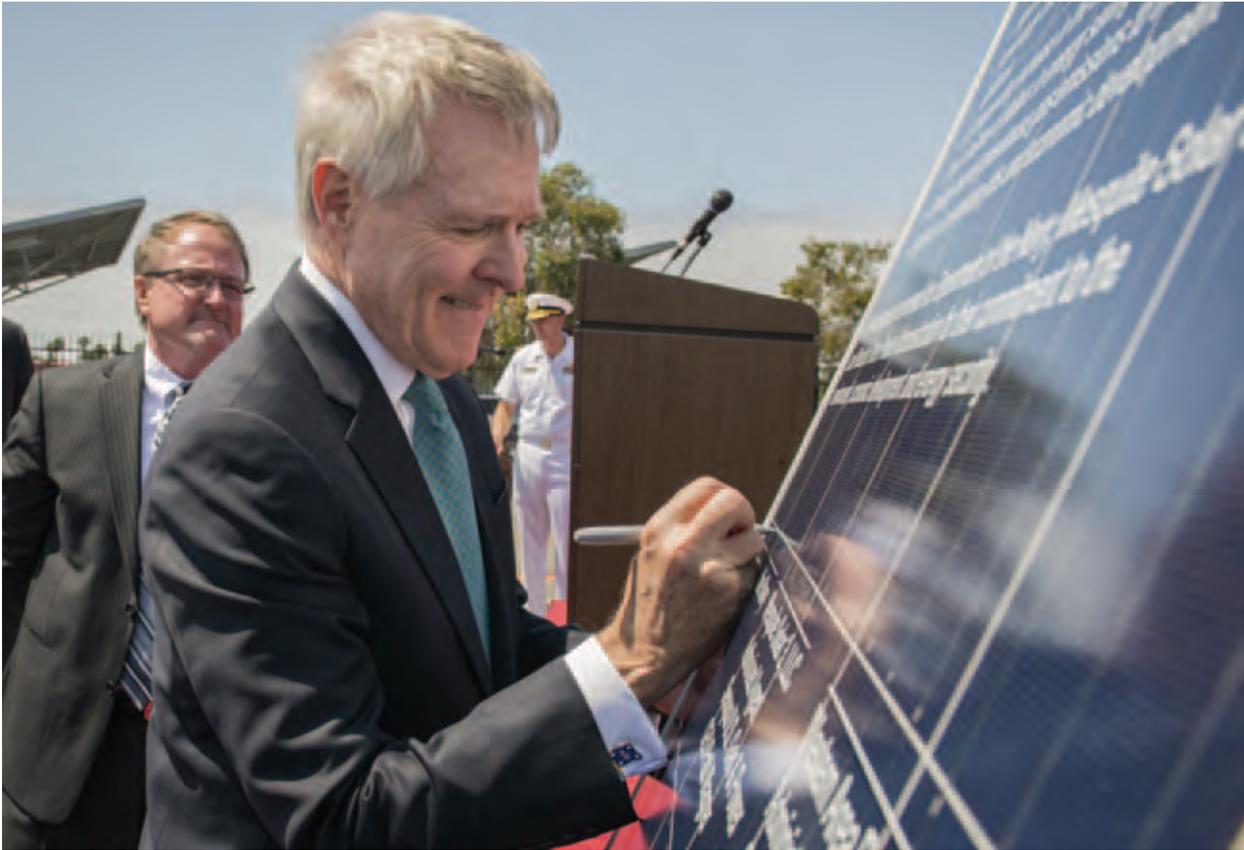
The DON's one GW goal considers all sources of renewable energy, such as energy produced from sunlight, wind, biomass, landfill gas, oceans (tidal, wave, current and thermal), geothermal, municipal solid waste and new hydroelectric generation capacity (from increased efficiency or additions).

One of the DON's interests while working to meet the one GW goal is linking renewable energy generation projects on Navy and Marine Corps to the DON's other

## For More Information

FOR MORE INSIGHTS into the strategy by which Navy and Marine Corps installations will produce or procure one GW of renewable energy by 2015, read our article "From the 1 Gigawatt Task Force: A Strategy for Renewable Energy" from the Winter 2013 issue of *Currents*. You can browse the *Currents* archives at the DON's Energy, Environment and Climate Change web site. Also, see the recent blog by the Hon. Dennis McGinn, Assistant Secretary of the Navy—Energy, Installations & Environment entitled, "What is a gigawatt?" on the Navy Live Blog site.





SECNAV Ray Mabus signs a solar panel during a ceremony commemorating an agreement with WAPA and Sempra U.S. Gas & Power to construct a 210 MW direct current solar facility. The agreement is the largest purchase of renewable energy ever made by a federal entity.

*MCS2 Armando Gonzales*

energy assets and programs, such as microgrids or smart grids, net-zero and energy efficiency maximization. Connecting renewable energy assets to Navy infrastructure through the deployment of microgrids increases energy security, a key objective of the one GW goal.

The renewable energy projects that the DON pursues come in all shapes and sizes. The number of megawatts (MW) that a project produces depends on a number of different factors, including the parcel available for development and project financing. While small-scale projects support the one GW goal, the Navy focuses on large-scale projects which often yield greater cost savings. These larger,

utility scale projects bring the DON closer to its 50 percent goal more quickly and are more attractive for potential third-party investors.

An example of such a deal is the recently signed power purchase agreement that the DON signed with the Western Area Power Authority (WAPA) and Sempra U.S. Gas & Power. The project is contributing more than 210 MW to the one GW goal, providing a third of the energy needed to power 14 Navy and Marine Corps bases in southern California, and will save the DON at least \$90 million over its lifetime. These large-scale Model 1 projects present one of the ways that the DON is moving towards bringing one GW of

renewable energy online and into procurement.

Through considerable work over the past 18 months, the DON was on track to meet SECNAV's goal by the end of 2015. Accomplishing this goal is a major step towards meeting the Navy's goal of 50 percent of total energy consumption coming from alternative sources by 2020. Together, SECNAV's vision and these goals are steering the DON towards an energy secure future, and are building a stronger and more resilient fleet. 📌

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