

Leading the Marine Corps in energy management, utilities conservation, power generating capacity and cost savings, the Combat Center now saves up to \$7 million annually in energy costs. The Combat Center has reduced its energy impact on the southern California power and energy system through a series of green energy and energy efficiency initiatives and now generates 60% of its own energy year round and 95% in the winter months.

MCAGCC is home to not only the largest cogeneration plant in the Marine Corps, but also home to one of the largest federally owned solar arrays.

Below: A solar sunshade at MCAGCC gathers sunlight for conversion into electricity.



The future of green energy at MCAGCC

• Future Solar

- 1.3 MegaWatts (MW) of additional solar panels will be completed in the near future.
- When completed, the installation will have a total of nearly 6 MW of solar generating capacity.

• Future Cogeneration

- The installation is installing another 9.2 MW cogeneration plant. This will give the base a total of 16.4 MW of cogeneration capacity.

• Microgrid

- A local small-scale version of the larger energy grid, Microgrid technology will control and coordinate energy production and distribution at the installation. It will integrate the installation's renewable and cogeneration resources with other sources of electricity to provide energy at the lowest cost and to help ensure energy security and efficiency.

• Other Renewable Energy

- Tests are also being conducted to determine the suitability of wind and geothermal energy at the installation.

If you have questions, contact the
Energy Manager at
760-830-5128.



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Green energy at MCAGCC

Did you know that a majority of the Marine Corps Air Ground Combat Center's (MCAGCC) electricity is produced on the installation? Not only does MCAGCC produce much of its own energy but it leads the Marine Corps in using green energy.

Harvesting the Desert Sun and Heat...

Solar Power

The sunny days in the Mojave Desert make the perfect setting for converting sunshine into electricity. The Combat Center is doing just that with their photo-voltaic panels.

Currently, solar panels provide about 5% of the total electricity for the installation, including housing. While it doesn't sound like much, one must remember that solar panels only produce electricity during daylight hours.

The Combat Center currently has 4.5 Megawatts (MW) of solar panels installed on sunshades, rooftops, and the ground. The largest is an array of 8706 panels. The entirety of the installation's solar panels can produce around 5 million kilowatt hours (KWH) of energy a year. This leads the Marine Corps and Navy. An average home uses about 9,000 KWH per year which means the installation's solar panels can produce enough power in a year for over 550 homes.



Above: A solar panel attached to the light post gathers sunlight and turns it into electricity for night runners.

Background: Solar panels on the hills above the Combat Center convert the desert sun's rays into electricity.

In addition to using solar panels to harness electricity for the base, solar powered lights have been installed on physical training (PT) courses and in training areas. The solar lights on the PT course have motion sensors so they do not waste energy or needlessly disturb the night sky.

Cogeneration Plant

An even larger producer of green energy at MCAGCC is the cogeneration plant. The Combat Center's cogeneration plant is the largest in the Marine Corps and produces 7.2 MW of electricity for the installation. The cogeneration plant first generates electricity and then uses the remaining heat to generate hot water for various utilities on base, such as: domestic hot water, building heating during the winter, and cooling using absorption chillers in the summer. This efficient green energy source produces 55% of the Combat Center's energy requirements.

All the forms of green energy used at the Combat Center help lessen the energy load on the outside grid system and help the community. By relying less on outside electricity, the energy security of the installation is increased.

...MCAGCC's green energy