

Did you know that the Marine Corps Air Ground Combat Center (MCAGCC) produces the majority of the electricity that is used aboard MCAGCC? The installation also leads the Marine Corps in green energy production.

As a servicewide leader in energy management, utilities conservation, power generating capacity and cost savings, the Combat Center saves up to \$9 million in energy costs annually. MCAGCC has reduced its energy impact on the Southern California power system through a series of green energy and energy efficiency initiatives. It generates 60 percent of its own energy year-round and 95 percent in the winter months.

In addition to having the largest cogeneration plant in the Marine Corps, the Combat Center is home to one of the largest federally owned solar arrays.



THE FUTURE OF GREEN ENERGY AT MCAGCC

Solar capabilities to increase

When additional solar panels are installed aboard the Combat Center in the near future, the installation's solar-generating capacity will expand to nearly 8 megawatts.

Microgrid to increase efficiency

A local small-scale version of the larger energy grid, microgrid technology will control energy production and distribution aboard the installation.

The microgrid system 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 at MCAGCC.

MORE QUESTIONS?

If you have questions about energy programs aboard the installation, call the Combat Center's Energy Manager at 760-830-5128.



This brochure was printed on 100% recycled paper using soy ink.



GREEN ENERGY AT MCAGCC



HARVESTING THE DESERT SUN AND HEAT.

Solar Power

With an average of 350 sunny days a year, the Mojave Desert is the perfect setting for converting sunshine into electricity. The Combat Center is doing just that with photovoltaic panels that provide about 5 percent of the total electricity for the installation, including family housing. An average home uses about 9,000 KWH of electricity per year, which means the installation's solar panels can produce enough power in a year to serve more than 550 homes.

The Combat Center currently has 5.4 megawatts (MW) of solar panels installed on sunshades, rooftops and on the ground. The largest is an array of 8,706 panels. Combined, the installation's solar panels can produce around 7 million kilowatt hours (KWH) of energy annually. This leads the Marine Corps and the Navy.

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



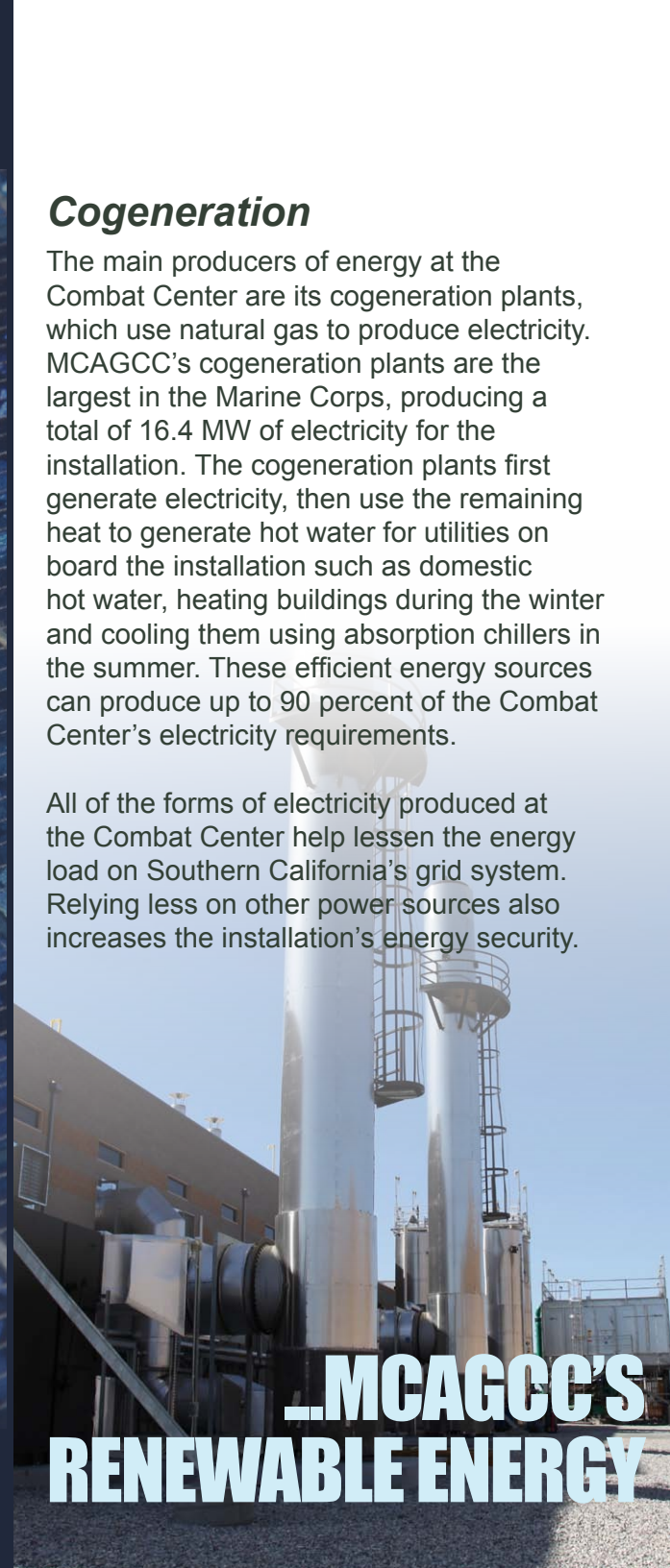
Above: Solar panels can be found atop buildings, parking and shade structures throughout Mainside.

Right panel: Innovations like the Combat Center's cogeneration plants put MCAGCC at the forefront of renewable energy in the Marine Corps.

Cogeneration

The main producers of energy at the Combat Center are its cogeneration plants, which use natural gas to produce electricity. MCAGCC's cogeneration plants are the largest in the Marine Corps, producing a total of 16.4 MW of electricity for the installation. The cogeneration plants first generate electricity, then use the remaining heat to generate hot water for utilities on board the installation such as domestic hot water, heating buildings during the winter and cooling them using absorption chillers in the summer. These efficient energy sources can produce up to 90 percent of the Combat Center's electricity requirements.

All of the forms of electricity produced at the Combat Center help lessen the energy load on Southern California's grid system. Relying less on other power sources also increases the installation's energy security.



MCAGCC'S RENEWABLE ENERGY