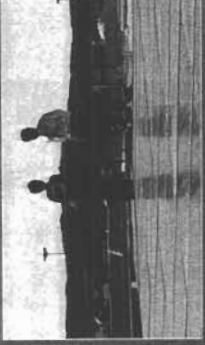


Correctional NEWS

design, construction,
maintenance & operations

An Emilen Publication
www.correctionalnews.com
JANUARY/FEBRUARY 2007
VOLUME 13, NUMBER 1

GREEN SCENE



The Greening of Santa Rita Jail
The nation's fifth largest jail, Santa Rita jail in Alameda County, Calif., uses solar power and a fuel cell cogeneration plant to generate up to 80 percent of the electricity needs for the facility.
Page 28

GREEN SCENE

Fuel Cell, Solar Panels Save Energy at Santa Rita

DUBLIN, CALIF. — A new fuel cell power plant, coupled with an extensive solar panel system, is capable of providing up to 80 percent of electricity needed at the Santa Rita Jail in Alameda County.

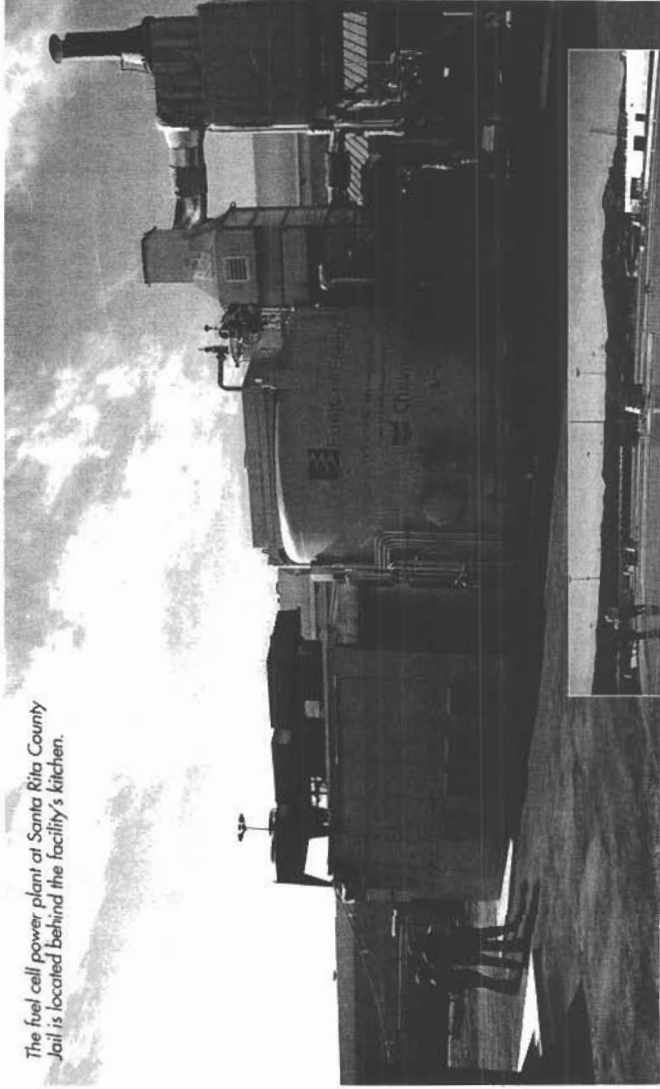
The power plant, which was dedicated in August and started producing energy last May, is the first megawatt-class fuel cell cogeneration plant in California and the second plant of its kind in the United States. It is located on-site behind the jail's kitchen and also provides for the facility's hot-water needs.

The plant generates 50 percent of electricity needed at the jail and produces 98.5 percent fewer emissions than traditional combustion-engine power plants. Because the emissions are so low, the county did not have to get an air quality permit for the project because it is certified as ultra-clean.

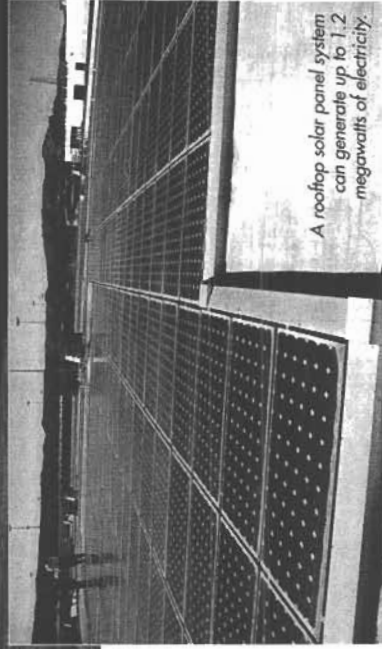
The plant cost \$6.4 million to install, \$2.4 million of which was paid for with grant money. It is expected to create a gross savings of \$21.6 million over 25 years, or a yearly savings of \$864,391.

The power plant, which was built by Fuel Cell Energy, is composed of four stacks of hydrogen fuel cells. A chemical process involving natural gas and water allows the plant to generate electricity. Because it is a complex system and it involves new technology, Alameda County negotiated a 13-year contract with Fuel Cell Energy to provide maintenance on the plant. Chevron served as developer for the project.

"Because it is such a new technology, we didn't feel that our maintenance people would be able to keep it running," says Matt Munitz, county



The fuel cell power plant at Santa Rita County Jail is located behind the facility's kitchen.



A rooftop solar panel system can generate up to 1.2 megawatts of electricity.

energy program manager.

The jail also has a rooftop solar-panel system that is capable of generating 1.2 megawatts of electricity. The system, which was installed in 2001 and 2002, includes three acres of rooftop solar panels and can reduce the facility's daytime reliance on the state's electricity supplier by 30 percent.

The fuel cell and solar panel systems are part of a countywide push to implement sustainable practices.