



The green jail Santa Rita unveils its smart grid

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California based Santa Rita jail, which houses 4,000 inmates, unveils its US\$11.7 million smart grid project. This is the first smart grid of its kind in the U.S.

Alameda County and Chevron Energy Solutions joined federal, state and local officials today to reveal the microgrid that will enable the jail to sustain power should its connection to the utility grid be interrupted. The project will allow Santa Rita Jail to ensure it has a supply of reliable electricity for its daily operations and security, and will save the county approximately US\$100,000 per year in energy costs.

The smart grid project is the culmination of several renewable energy projects implemented at the jail, including approximately 1.2 MW of solar photovoltaic panels, a one MW fuel cell cogeneration plant, and wind turbines, along with a two MW advanced energy storage system.

The project is partly funded by the U.S. Department of Energy, the California Energy Commission and the California Public Utilities Commission. This microgrid is also a component of the U.S. Department of Energy's plan to deploy an advanced, interconnected energy network which is capable of reducing congestion when energy demands peak on the utility grid.

Interruptions to the jail's power supply can create serious problems for the Sheriff's Department staff and inmates housed there. The self-sustaining smart grid mitigates these concerns by integrating all of the jail's onsite power generation with energy storage to ensure that power is never lost. The jail can disconnect from the grid anytime and operate on its own clean power for up to eight hours.

The smart grid also allows the jail to buy power from the utility during the least expensive nonpeak hours and store it for use during the most expensive summer peak hours, which provides significant savings.

"This project is a major step forward in transforming California's energy grid and making a cleaner energy future possible," said Robert Weisenmiller, chair of the California Energy Commission. "Using the latest in renewable energy, Santa Rita Jail demonstrates California's commitment to greening our state's energy security. Once again, the Golden State is leading the way in clean technology by embracing technological innovation and public-private collaboration."