

## Energy Assessment Training Reduces Energy Costs for the U.S. Coast Guard Sector Guam

Part of NREL's mission is empowering its clients to meet their energy goals by providing them the resources and education to do so. One way we accomplish this is by giving extensive energy assessment trainings to energy managers, facility managers, and building engineers, among others. For many federal clients, this training serves as the starting point for complying with the Energy Independence and Security Act of 2007, which requires the completion of energy assessments at 25% of an agency's buildings every four years.

To successfully meet this requirement, U.S. Coast Guard Sector Guam energy managers and other U.S. Coast Guard staff participated in week-long NREL-led energy assessment trainings in 2008 and 2010. Through traditional workshop tactics and hands-on field activities, the U.S. Coast Guard participants were taught to:

- Complete data collection forms
- Use on-site assessment and NREL-developed analytical tools
- Generate a comprehensive energy assessment report.

As a result of the training, Sector Guam energy managers were able to use that knowledge and access to resources to conduct their own comprehensive energy assessments of their facilities, and ultimately, work toward meeting their energy goals.

### Energy-Saving Retrofits

When the Sector Guam energy managers looked at their buildings, they identified over 50 energy-saving retrofit projects, which, if completed, totaled over \$300,000 in savings each year. As part of their analysis, the energy managers considered such factors as material costs, installation costs, cost savings per year, and the total life cycle costs.

With that information, Sector Guam was able to implement those identified energy-saving strategies during a large-scale retrofit in October 2011. The retrofit focused on increasing energy performance through lighting, occupancy sensors, and hot water projects.

### U.S. Coast Guard Guam Project Highlights

Capital investment: \$27,000, plus labor costs of three employees for two weeks

Return: 24% energy use reduction and 42% energy cost reduction for fiscal year 2012 (300,000 savings/year)

Retrofits made: Approximately 50 projects related to lighting, occupancy sensors, and hot water

### Small Investment, Big Results

What seems like a minimal investment—an upfront cost of \$27,000 for materials and travel plus the labor of three employees for two weeks—resulted in a noticeable decrease in energy use the very first month the retrofits were completed (see Figure 1).

From fiscal year (FY) 2011 to FY 2012, Sector Guam reported an energy use reduction of 24% and a 42% decrease in energy costs, according to U.S. Coast Guard Captain John Hickey. Both figures he directly credits to the NREL training and the consequential energy-saving strategies Guam implemented.

“Our energy savings can be attributed to the energy assessment training in 2008, when we first started working with NREL on this issue,” said Hickey.

To learn more about NREL's energy assessment training or to obtain energy assessment checklists, contact Jesse Dean at [jesse.dean@nrel.gov](mailto:jesse.dean@nrel.gov) or 303-384-7539.

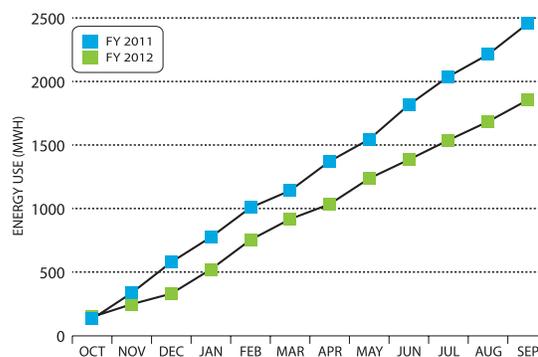


Figure 1. U.S. Coast Guard Sector Guam cumulative energy use, before FY11 and after FY12 retrofits

[www.nrel.gov/tech\\_deployment](http://www.nrel.gov/tech_deployment)

NREL/FS-7A20-58243 • May 2013

Photography (from the top): iStock 13737597; Peter McNutt, NREL 18625; iStock 12123595; Dennis Schroeder, NREL 20040; U.S. Coast Guard Petaluma Site, NREL 17395; Warren Gretz, NREL 10611

