

Resource efficiency manager helps identify big energy savings

By Debra Valine
Public Affairs Office

The National Training Center at Fort Irwin, Calif., is getting a replacement hospital that will improve patient care and incorporate energy savings measures that will save millions of dollars in energy costs.

A Resource Efficiency Manager working under contract with the U.S. Army Engineering and Support Center, Huntsville, was part of the design and energy planning team that helped identify seven major conservation measures that will decrease energy use by 33.2 percent. The design team, led by the Los Angeles and Sacramento districts, Corps of Engineers, included Huntsville Center's Medical Center of Expertise and Mobile District as well, and earned an Honor Award for Conceptual Design from the 2012 Chief of Engineers Awards of Excellence Program.

Huntsville Center has an Indefinite Delivery Indefinite Quantity contract with a pool of four REM contractors available to any federal agency.

According to Hossam Kassab, the REM at Fort Irwin, the Weed Army Community Hospital replacement project was conceived by the Army to improve the medical care provided to Soldiers, military families and retirees in the Fort Irwin community.

"This mission-critical project includes the design of a replacement hospital, clinic alterations, utility plant building, ambulance shelter and helipad," Kassab said. "The project combines a state-of-the-art facility design with innovative energy conservation and generation features. As the nation's first carbon-neutral hospital, this project will establish Fort Irwin as a leader in energy independence in the health care and military sectors – setting a precedent for future military facilities. My



Courtesy photo

An artist's rendition of the Weed Army Community Hospital at Fort Irwin, Calif. The hospital design includes photovoltaic and solar thermal arrays to help decrease energy use by more than 30 percent.

involvement as the REM at Fort Irwin was instrumental in the design process helping to coordinate the sustainable features of the design to work with the local climate and the existing base infrastructure."

Sustainable principles, including life cycle cost-effective practices, have been integral at each phase, from design and development through construction.

"As part of the project team, I worked to incorporate seven major conservation measures that will decrease energy use by 33.2 percent," Kassab said. "These measures will reduce greenhouse gas emissions by 1,403 metric tons per year below the baseline. Additionally, renewable energy systems, including a photovoltaic (PV) array and a solar thermal array, take advantage of the site's solar irradiance potential and meet all the hospital's energy needs. Clean power sources include a 2.4 megawatt solar photovoltaic array and a solar thermal array that provides a majority of the hot water the hospital requires. I successfully worked with the local utility company to help secure more than \$2 million in rebates that

will help minimize initial costs. In addition, I will be helping commission the hospital once completed to ensure the mechanical and electrical systems perform as designed."

"The Huntsville Center places REMs at installations to work with local energy program managers to identify cost-effective programs and practices to reduce energy and water costs," said Karen R. Moore, the REM program manager. "Savings generated more than offset the cost of the REM. REMs provide a comprehensive energy portfolio for the installation to reduce their energy consumption and plans to meet federal mandates to use renewable energy sources. In addition, the REM program is expanding to use REMs at higher Headquarter levels to perform energy saving audits across multiple installations and national programs."

In the May 12, 2013, 2012 Net Zero Progress Report, Hon. Katherine Hammack, Office of the Assistant Secretary of the Army for Installations, Energy and the Environment, recommended REM as one of four best practices to achieve Net Zero.