Federal Energy and Water Management AWARDS 2014

Main photo: Integration of the PV system with the pictured ice thermal storage system results in occasional net-zero energy consumption during peak PV production.

Inset photo: Project Team (left to right): Danny Davis, Glenn Tyler, Steve Bass, Sam Hagins, and Rodney Cryer

Steven Bass, Rodney Cryer, Danny Davis, Samuel Hagins, Glenn Tyler

U.S. Department of Veterans Affairs
Thomas E. Creek VA Medical Center
Amarillo, Texas

In 2013 the Amarillo Veterans Affairs (VA) Health Care System constructed a 2.28 megawatt photovoltaic (PV) covered parking project at the Thomas E. Creek VA Medical Center that provides about 30% of the center's electricity to save $245,000 annually.

Keeping vehicles cooler during summer and protecting them from rain, snow, and hail, the innovative PV system is the first in the VA used in conjunction with an ice thermal storage system, which was designed to shift the medical center's air conditioning load from day to night. Integrating the PV with thermal storage load shifting further reduces daytime energy needs. When PV and thermal storage are functioning at their peak, some electricity is even sent back to the grid, which pays for electricity that VA uses at other times.

This synergy of solar PV and thermal storage has distinguished the medical center as VA's leader in minimizing daytime electricity demand. It has helped set the standard for integrating different types of sustainable energy, and has already led the way for similar systems at other VA facilities.