

NAS Fort Worth JRB Eyes \$14.4 Million in Energy Savings

By Sue Brink, NAVFAC Southeast Public Affairs Officer, Photo by MC2(AW) Bradley Dawson



An Aug. 5 ribbon cutting ceremony for the first solar-paneled parking structure on base. The solar panels will provide electricity from a renewable resource and offset current electric consumption and peak demand. From left, Kevin Smith, NAVFAC SE; Cmdr. Richard Augenstein, executive officer of NAS Fort Worth JRB; Ensign Jonathan Zisko, NAVFAC SE; Dennis Schneider, NORESKO project manager; Capt. Robert A. Bennett, commanding officer of NAS Fort Worth JRB; and Lt. Cmdr. Keith Miertschin, public works officer.

NAS FORT WORTH JRB, Texas - Naval Air Station Fort Worth Joint Reserve Base held a ribbon cutting ceremony Aug. 5 to celebrate a project that will provide \$14.4 million in energy savings over 15 years through a \$7.1 million Energy Savings Performance Contract (ESPC) that was awarded in December of 2009 to NORESKO, LLC for energy improvements to facilities on the base.

The project guarantees a first year annual energy savings of more than 28,000 mmBTU, which represents a 34 percent energy reduction for the affected buildings and a 9 percent base-wide energy reduction.

“This type of alternatively financed energy project has proven to be a great deal for NAS Fort Worth JRB,” said Public Works Officer Lt. Cmdr. Keith Miertschin. “Not only do we receive the guaranteed energy savings, but the installation also has benefited from replacing numerous inefficient HVAC units and lighting systems that have operated well beyond their economic life.”

Projects under this ESPC include HVAC upgrades and controls, energy efficient lighting upgrades, power factor correction as well as renewable energy.

“An ESPC is a very powerful alternative financing tool that we [Navy] have in our funding arsenal,” said Naval Facilities Engineering Command (NAVFAC) Southeast ESPC Facilitator Kevin Smith. “When planned and executed properly, we are able to shift the burden of performance and risk to the Energy Service Company (ESCO). They are contracted for operations and maintenance, and to guarantee and verify the energy savings they have implemented.”

Twenty-two buildings were identified to receive HVAC energy saving control strategies which include night setbacks, supply air temperature resets, hot water supply temperature reset, chilled water supply temperature reset, and occupancy based temperature control in barracks. Five existing air cooled chillers were replaced while others were recommissioned and new controls added for equipment in good condition.

Twenty-seven buildings were identified for economically attractive lighting upgrades and retrofits. These modifications will improve light quality and reduce maintenance costs. This included replacing taxiway lighting with light emitting diode (LED) technology.

A 10-kW DC photovoltaic (PV) array was installed at the base library parking area. The PV array will provide electricity from a renewable resource and offset current electric consumption and peak demand. The array has a direct connection to the grid such that no batteries are required for energy storage.

The main substation was fitted with an automatically controlled capacitor bank which will compensate for the existing inductive loads that have caused the power factor to fall below the minimum allowable as set by the electrical utility company. Raising the power factor above the minimum allowable will result in penalty cost avoidance in the monthly electric bill. DoD has mandated electric and natural gas consumption be reduced at least 30 percent by 2015. In addition, Executive Order 13514, signed in 2009, intensifies the energy savings requirements even more.

“ESPCs help to meet the federal government’s goals on energy efficiency and water conservation,” Smith said. “The federal government is the largest single user of energy in the United States and these awards demonstrate a commitment to sound government stewardship by recognizing efforts to save energy and reduce federal energy costs.”