17th SFS energy efficient roof increases savings

By Airman 1st Class Erica Flores, 17th Training Wing Public Affairs / Published June 28, 2012

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GOODFELLOW AIR FORCE BASE, Texas-- Mary Lumsdon, 17th Civil Engineering Squadron, opens up the meeting discussing the new 17th Security Forces Squadron High-Performance Energy-Efficient Cool Metal Roof June 27. The new roof produces solar energy to the building and also helps to collect rain water. (U.S. Air Force photo/Airman 1st Class Michael Smith)

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GOODFELLOW AIR FORCE BASE, Texas -- The final presentation of the Environmental Security Technology Certification Program project on the 17th Security Forces Squadron roof was held June 26.

The addition of solar electric, solar thermal and rainwater harvesting systems to the building's roof is projected to save energy expenses to the amount of $11, 748 per year.

Solar laminate panels will generate electricity and the solar thermal water collector will provide hot water to the building.

The roof also has a unique ducting system added to it which will aid in cooling the building. The rainwater system will collect, manage and reuse the rain water for things such as toilet water.

In addition to cutting energy costs, the project begins to reach the goal of base energy consumption reduction of 30 percent by 2025.

The project utilizes cutting-edge technology and is the first of its kind within the Air Force and is anticipated to generate interest Department of Defense wide.

"The purpose of this project will be to demonstrate that we can take various technologies, in this case a solar space heating system, a system that generates electricity from the Sun's energy, an additional insulation and ventilation system, along with cool metal roof and combine them together to dramatically reduce the overall energy footprint of this particular building," said William Poleatewich, director of new technology for Pfister Energy, Inc.

Each month the results of the data collected on energy consumption of the building will be sent to the 17th Civil Engineering Squadron for review.

Already positive results of the new additions to the roof are evident.

"The electrical energy consumption of the 17th SFS building from the month of June 2011 compared to June 2012 has been reduced by 44 percent," said Mary Lumsdon,17th CES energy manager.