National Guard of Virginia Relies on PV Monitoring Sensors from Lufft

Challenge

The Virginia National Guard was looking for a cost-effective, environmentally friendly, and independent power supply as well as an monitoring solution for ot at their site in Fort Pickett.

Solution

The Virginia National Guard 183rd Regiment decided to complete a solar installation at their Regional Training Institute (RTI) at Fort Pickett, VA. It provides the RTI with nearly 80 percent of its daytime energy needs.

Benefits

The Lufft WS provides wind, temperature, humidity and air pressure data. Together with a Kipp & Zonen pyranometer they provide all necessary field data that is then integrated into a Schneider Electric BAS.

Technologies used

Lufft

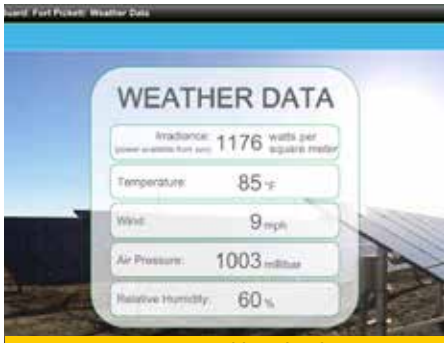
LUFFT WS500

Compact Weather Sensor

For measurement of temperature, relative humidity, air pressure, wind direction and wind speed.

Case Study

The Virginia National Guard 183rd Regiment decided to complete a solar installation at their Regional Training Institute (RTI) at Fort Pickett, VA. The project, a $2.2 million, 488 kilowatt solar array that measures 10,000 square yards and consists of nearly 2,000 individual solar panels, provides the RTI with nearly 80 percent of its daytime energy needs.



Energy Management Dashboard and Data Evaluation. Image: Virginia National Guard

LUFFT WS500 Multi-Parameter Weather Sensor

Compact all-in-one weather sensor for measurement of temperature, relative humidity, air pressure, wind direction and wind speed simultaneously. Easy to install and connect to a radiation sensor.

LUFFT WS500 monitoring the solar power plant in Fort Pickett. Image: Virginia National Guard

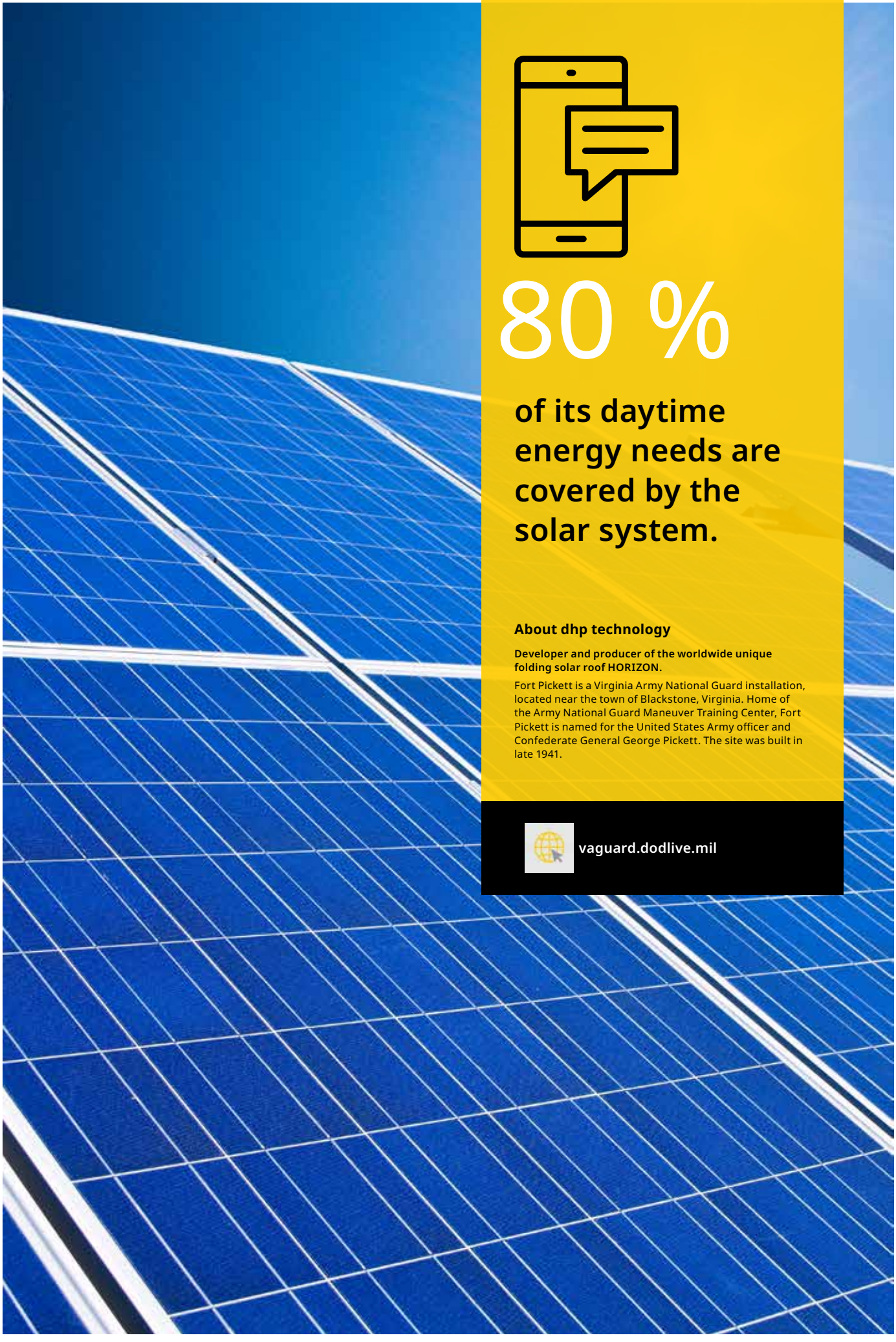
This field is estimated to produce 712,000 kilowatt hours per year

It was installed adjacent to the RTI campus.

The photo here shows a Lufft WS500 weather sensor in the foreground with the installation array behind. The Lufft weather sensor provides wind speed, wind direction, temperature, humidity and air pressure. The weather station and pyranometer together provide weather and solar radiation data from the field that is then integrated into a Schneider Electric BAS (Building Automation System) and display on the customer's energy management dashboard. Evergreen Solar was the installer on the job with oversight from Schneider Electric. Lufft provided the weather sensor that provides data for the array.

The demand for reliable sources of renewable energy is growing in the United States. The U.S. Solar industry achieved another record year in 2014, growing by 34% over 2013 to install nearly 7,000 megawatts (MW) of solar electric capacity. Within the photovoltaic (PV) sector, over 6,200 MW of capacity was installed, led by the residential and utility segments (due to Solar Energy Industry Association data 2014). Reduced barriers to entry and an advantageous political climate are helping to grow solar power around the country. Companies as well as state run organizations are recognizing the benefits to installed solar capacity on their rooftops. Rooftop solar provides substantial benefits not only for the installer but for every surrounding utility customer. It helps power the homes and shops that adopt it, to be sure, but it has far-reaching benefits for other customers as well.

LUFFT WS500 monitoring the solar power plant in Fort Pickett. Image: Virginia National Guard



80 %

of its daytime energy needs are covered by the solar system.

About dhp technology

Developer and producer of the worldwide unique folding solar roof HORIZON.

Fort Pickett is a Virginia Army National Guard installation, located near the town of Blackstone, Virginia. Home of the Army National Guard Maneuver Training Center, Fort Pickett is named for the United States Army officer and Confederate General George Pickett. The site was built in late 1941.

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