

Afghan refugee beddown effort by AFCEC

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A 5,000 person beddown effort for Afghan refugees is taking place at installations like Holloman AFB, New Mexico.

The influx of a significant number of people or mission to any installation is a challenge that often takes years of preparation, however, sometimes events occur that require a more rapid response.

The Air Force has the proven capability to build an airfield in the middle of nowhere within a short period of time, but when existing facilities are available and needed, it takes careful consideration to determine how best to address the immediate need.

In the case of bringing thousands of people from across the world into a temporary, safe and livable environment created in an existing location, there are several limiting factors to consider.

While many locations may have available excess electrical power capacity, the ability to actually route power to a specific location depends on several factors, such as size of cables, types of transformers required and safety devices that may be needed.

In these situations it is very helpful to have an actual mathematical and computerized model of the power system to properly evaluate all of limiting factors. The Air Force has been actively creating and updating such models at almost every installation around the world for the last two decades. This takes a great effort to keep them current and usable to the Air Force and installations.

The computerized models allowed civil engineers to evaluate many different concerns such as maximum loads, safety concerns and power quality. Without knowing the limiting factors, the system would not be reliable or could put people at risk.

In support of Holloman, after reviewing the current power model and talking with the installation, the best solution was deemed to be a hybrid approach for bringing power to the bed down effort. Currently the utility has the capacity to supply the current and future load for any mission requirement at the base.

Most base and long-term loads can be supplied via existing Mega Volt Amp transformers but upgrading miles of overhead conductors to supply the required medium voltage current to the refugee base load can be a limiting factor. Protective device trip settings at multiple substations have to be adjusted to be ready to support the mission. The rest of the load is dynamic and will be using expeditionary power

units, generators, also known as BEAR units, to power the rest of the load as refugees move in and out of the camp.

It takes the combined efforts of the entire team, the base shops, base civil engineer, Civil Engineer Maintenance Inspection and Repair Team and AFCEC to successfully complete a mission this large.

Once the mission is completed the current wire will remain in place in case of future needs. The transformers will be taken down and stored as spares, or transported back to their original locations. All trip settings will be reset to the original settings to protect all downstream devices.

Because of continued efforts to update the power models, the Air Force is able to reduce risks and minimize uncertainties. This is essential to ensure the mission will not fail and the Air Force we will always be able to adequately respond to mission changes when the time comes.