

# New energy solutions get field tryout at NIE

U.S. Army

WHITE SANDS MISSILE RANGE, N.M. (Nov. 19, 2012) -- The Army's Network Integration Evaluation is not just about testing radios, smartphones and satellites.

It's also giving Soldiers the latest generators, solar panels and other operational energy systems for a hands-on assessment of how best to power their new communications gear.

"As we add more capability, all of the new equipment consumes energy," said Katherine Hammack, assistant secretary of the Army for Installations, Energy and Environment, or ASA(IE&E) who visited NIE 13.1 operations, Nov. 14. "The question is, how can we ensure we increase our capabilities, increase our lethality, yet better manage power -- and that comes in many shapes and forms."

NIE 13.1, which concluded Nov. 17, was the fourth in a series of semi-annual field exercises designed to quickly integrate and mature the Army's tactical communications network, and to accelerate and improve the way networked and non-networked technologies are delivered to Soldiers. The event included more than half a dozen innovative operational energy capabilities submitted for evaluation by government and private industry.

Ranging from generators mounted on tactical vehicles to roll-up solar panels for charging handheld radios, the systems received a thorough workout courtesy of the 2nd Brigade, 1st Armored Division.

Capt. William Branch, a company commander with 2d Brigade, 1st Armored Division, evaluated several ways to power communications and base defense systems at his forward operating base, or FOB, including through hybrid-energy solutions that combine solar arrays, batteries and "smart" generators that automatically begin operating only when solar power is insufficient. He said the roll-up solar panels, carried inside a backpack, enabled one of his Soldiers to stay in radio contact during extended trips outside the FOB walls.

"It allows him to go on a lot longer when he does his reconnaissance missions," Branch said.

The Soldier feedback will help the Army determine which new products have merit for tactical use, as well as the right mix of power generation for various echelons throughout the brigade combat team. A similar strategy is now underway in Afghanistan, where the Army is delivering fuel-saving generators known as Advanced Medium Mobile Power Systems, or AMMPS, to the 173rd Airborne Brigade Combat Team. For each 173rd location, the Army is tailoring power distribution and power management for maximum efficiency based on operational needs.

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"It's paying huge dividends, and it's reduced their fuel demand at those combat outposts because they've been setting up mini-grids and right-sizing those bases," said Col. Timothy Hill, director of Operational Energy and Contingency Basing for ASA(IE&E).

Cutting down on fuel consumed on the battlefield is not just a cost and energy savings, but it also reduces the number of convoys needed to supply that fuel, removing Soldiers from harm's way, Hammack said.

"Being green for green's sake is not something the military is necessarily interested in -- we're interested in being green because it increases the mission capability," she said. "If we can put more Soldiers in the fight and reduce logistics as an inhibitor to our mission, then we're all going to be better off and we're going to be able to handle a lot of these new capabilities and technologies."

By expanding the NIE beyond strictly network capabilities, the Army can get more value out of the construct, as well as obtain lessons-learned for how to sustain communications equipment in theater. NIE 13.2, scheduled for the spring of 2013, will also evaluate operational energy systems.

"The Army recognizes that the next-generation network brings new demands for power, down to the lowest echelons of the battlefield," said Col. Rob Carpenter, director of Army System of Systems Integration. "The NIE provides a venue to evaluate the latest solutions to this challenge, and 'Soldier-harden' them before they are sent to the battlefield."

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