



Naval Base Ventura County Tests Diesel-Powered Hybrid Vehicles

Testing of diesel-powered hybrid vehicle technology for possible deployment to Navy and Marine Corps bases worldwide officially started June 15 by Navy engineers in San Diego and Bangor, Wash.

The program kicked off with the May 12 delivery of two vehicles to the NAVFAC Southwest Coastal Integrated Product Team (IPT) in San Diego. A second pair of trucks was pressed into service in June with the recycling team in Bangor, Wash.

The Navy has commissioned a total of four test vehicles — two diesel hybrids and two conventionally powered trucks — that will be compared side by side for six months at Bangor and the California site. Each location will receive a single hybrid to be tested against a like model non-hybrid. Both sites will operate the trucks under normal conditions, and the results will be compared to determine potential fuel savings for the fleet.

“The testing in this phase will be compared to earlier baseline tests to determine how well the hybrids match up in the real world against their conventional counterparts,” said Naval Facilities Engineering Service Center (NAVFAC ESC) Commanding Officer, Capt. Paz B. Gomez. “This has the potential to save millions of dollars for the fleet and taxpayers,

enabling the Navy to move closer to achieving the Secretary of the Navy’s energy goals of 50 percent reduction in petroleum used in naval vehicles by 2015.”

NAVFAC ESC at Naval Base Ventura County Port Hueneme is working with the sites to monitor critical operating data on the truck use and hybrid system status for the duration of the test period. The trucks will undergo weekly inspection of the hybrid systems. The fleet managers, operators, and service teams will provide important input on the truck status throughout the demonstration period.



A U.S. Navy hybrid electric utility truck undergoes fuel economy lift cycle testing. The truck will support utility line maintenance at installations in the San Diego area as part of a hybrid demonstration study.

“Both the NAVFAC Southwest Base Support Vehicles and Equipment Core team and the Coastal Integrated Product Team worked closely with NAVFAC ESC and the manufacturer to make this happen,” said Luann Benson, NAVFAC Southwest Base Support Vehicles and Equipment product line coordinator. “We are looking forward to reviewing the results and hopefully implementing more heavy hybrid vehicles.”

One demonstration truck includes an innovative hybrid platform known as a hydraulic hybrid system, which works by charging an on-board gas accumulator. Its simple layout allows for rigorous use and frequent stops while delivering lower costs through high volume production. This type of technology becomes increasingly important with the rising costs of petroleum.

Hybrid electric systems will reduce noise, allowing quiet engine-off operation at low speeds or idling for work modes. This not only enhances environmental quality of life but also improves safety and productivity. Line workers can better communicate without having to compete with diesel engine noise, and crews can work normal shifts without concerns over additional noise disturbance.

While improved fuel efficiency is a critical driver for this demonstration, the hybrid systems offer unique environmental benefits. The hybrid trucks’ regenerative braking system will significantly eliminate the use of a conventional brake system.

This not only avoids the downtime and cost of brake replacement, but it also avoids the fine particulate matter generated with each application of the brakes, better protecting air and water resources.

“This is just one small example of the Navy’s many contributions to how our government is leading the charge towards a healthy and sustainable future,” said Ken Furra, NAVFAC Southwest Coastal IPT Public Works Business Line team leader.

Test data will be released to other Department of Defense components and federal government organizations by 2012, and the technology may eventually benefit warfighters in all theaters.