

Mk45 Upgrades, Mod 4, and Long Range Land Attack Projectile: Options for the Turkish Navy

Executive Summary

Since 1971, BAE Systems has delivered and improved the Mk 45 for the U.S. Navy and International customers around the world. To date, more than 250 systems have been provided to 11 countries.

In addition to making four different systems which are type classified (Mod 0, 1, 2 and 4), BAE Systems has also developed an upgrade to the Mod 2 gun to give it the same control system as the Mod 4. This upgrade allows the end user to access the same supply chain as the U.S. Navy uses for its Mod 4 guns, and it does not require the use of analog components which will be harder to source in the future. This system can also fire long range munitions more than 35 nautical miles. One international customer has adopted this upgrade and the U.S. Navy has purchased one for testing. This upgrade can be done in country with a local partner or depot.

The Mod 4 gun features a completely digital control system and a gun that is able to fire long range munitions. Five countries have procured this gun system. It has been in production for more than 10 years with over 50 units delivered. This 24 ton system can automatically select ammunition for each round fired and can reach 21 nautical miles with extended range charges and more than 50 nautical miles with a long range projectile. The gun automatically handles misfires and does not require water cooling. BAE Systems has helped several countries produce the Mod 4 (with local industrial partners) to meet those countries' procurement objectives. BAE Systems can also take Mod 2 guns and convert them completely into a Mod 4 configuration.

After the U.S. Navy cancelled its Extended Range Guided Munition (ERGM) program in 2008, BAE Systems decided to invest in the development of a 5-inch Long Range Land Attack Projectile (LRLAP). To do this, BAE Systems is leveraging technology developed for a 6-inch LRLAP designed for the Advanced Gun Systems which is in production for the U.S. Navy's DDX Class Destroyer. BAE Systems has completed testing a variety of tests for the 5-inch LRLAP and plans to conduct its first guided flight test in 2012. The LRLAP will give the Mk45 and its users a significant capability to strike from longer ranges than the Mod 2.

Given the Mk45 guns on the Turkish Navy's MEKO Class frigates, the Turkish Navy has a wide variety of options to meet its future requirements with upgrades or procurement of new guns. The presentation will describe some of those options.