Hypersonic Technology Becomes a Top Pentagon Priority

WASHINGTON – Although hypersonic technology originated in the United States, “we didn’t choose to weaponize it, but now we have to,” the Pentagon’s top technology official said Aug. 1.

“The enemy gets a vote. They have chosen to weaponize hypersonic,” Michael D. Griffin, the undersecretary of defense for research and engineering, said.

To respond to that emerging threat, the Pentagon has made regaining the advantage in hypersonic technology one of its top priorities and has brought the three military departments together in a multiservice effort to develop hypersonic weapons, Griffin told a briefing sponsored by the Senate Aerospace Caucus.

“We want to have some of our first hypersonic strike weapons fielded in the early 2020s,” and are working to meet Defense Secretary James Mattis’ “goal of dominance by 2028.” That means an air-breathing” hypersonic weapon capable of a “prompt conventional strike: that can “hold an enemy at risk,” he said.

Hypersonic generally means an air vehicle that can reach and sustain speeds of at least Mach 5, or five times the speed of sound, which could be more than 3,000 miles an hour.

Griffin said he was not prepared to say what form of hypersonic vehicle they would have by 2028, whether it would be solely an expendable weapon, or an aircraft that could carry and release guided munitions and return, and whether it would be manned or unmanned.

Each of those variables raises the technological challenge to the quest.

But by using the term “air-breathing,” Griffin is ruling out the simplest solution, a rocket-propelled missile that would have relatively limited range.

Robert A. Pearce, deputy associate administrator for strategy at NASA, noted that while the agency has close ties with the Pentagon, its main focus is on commercial use of technology

“Our primary concern is reusable systems,” Pearce said.

Congress has been increasingly vocal in its demands that the Pentagon match or exceed the hypersonic capabilities of potential adversaries.

Griffin noted that international media has reported that China has successfully tested hypersonic vehicles multiple times and that Russian President Vladimir Putin bragged on Russian television of advances in hypersonics.

That is why hypersonic weapons, along with offensive and defensive cyber, was among the top priorities Mattis gave him when he took the new technology and engineering job, Griffin said.

Those technologies are important, “because much of the world is catching up” and eroding the technological advantage that the U.S. military has had in conflicts since World War II, he said.

The United States would not win a “man-to-man engagement” with our potential adversaries and “we don’t want to engage in that kind of fight.”

The way to prevent that kind of battle is to regain the technological advantage with prompt conventional strike, electronic warfare, directed energy, cyber and space, Griffin said.

“Those are the high-leverage priorities that will allow us to regain the advantage,” and “when we appear to be so strong,

people will not want to engage us. That’s the best way,” he said.