In a peculiar twist in the U.S. Navy’s MQ-25 Stingray competition, one of the leading U.S. drone manufacturers—General Atomics Aeronautical Systems (GA-ASI)—has partnered with rival Boeing Autonomous Systems to offer its carrier-based aerial refueling UAV.

In a Feb. 12 press release, General Atomics said it is collaborating on MQ-25 with the relatively new Boeing business unit, along with several other major suppliers: BAE Systems, GKN Aerospace Fokker, L3 Technologies, Rockwell Collins, and UTC Aerospace Systems.

General Atomics is best known for its family of armed Predator UAVs, the most operationally active being the U.S. Air Force’s MQ-9 Reaper and U.S. Army’s MQ-1C Gray Eagle. The company’s teaming arrangement with Boeing is surprising, considering that Boeing Defense, Space & Security has submitted its own proposal for MQ-25, as has Lockheed Martin.

Boeing Autonomous Systems emerged out of a company restructuring in June 2017, which saw the company’s military aircraft business rearranged into three subgroups: autonomous systems; strike, surveillance and mobility; and vertical lift.

The autonomous systems group incorporates Boeing’s primary airborne, space and maritime unmanned platforms, such as the Insitu ScanEagle, RQ-21 Blackjack, QF-16 full-scale aerial target, Phantom Express, X-37B, Wave Glider, and Echo Voyager.

Boeing’s competing MQ-25 Carrier-Based Aerial Refueling System proposal is led by Phantom Works, which recently released images of its clean-sheet, long-wing UAV proposal. That aircraft was recently spotted undergoing testing at Lambert Field in St. Louis, home to Boeing’s military aircraft facility.

“[We are] pleased to have the opportunity to collaborate with General Atomics on its MQ-25 proposal [and] look forward to supporting [the company] with our aviation and
autonomous experience,” says Chris Raymond, vice president and general manager of Boeing Autonomous Systems.

In announcing the General Atomics-led MQ-25 industry team, GA-ASI President David Alexander said the strong lineup represents “the best” of the aerospace industry.

“This collaboration will provide the U.S. Navy with a fleet-ready unmanned tanker with exceptional growth, well within the service’s preferred timeline,” he says. “As the world’s premier quick-reaction unmanned aircraft system manufacturer, we are committed to delivering the most effective, affordable, sustainable, and adaptable carrier-based aerial refueling system at the lowest technical and schedule risk.”

The company submitted its proposal for MQ-25 ahead of the Jan. 3 deadline. If selected, it would be the company’s first full-scale development of a navalized drone designed to operate from Navy aircraft carriers. Most of its other UAVs operate from traditional runways.

GA-ASI has selected Pratt & Whitney Canada’s high-bypass PurePower PW815 commercial engine to power its tanking UAV, which appears to be an enlarged maritime version of the single-engine, wing-body-tail Predator C Avenger.

The PW815 engine was introduced on the new Gulfstream G600 business aircraft, which has a range of 6,200 nm. The engine received type certification by Transport Canada in early 2015. Its sister engine, the PW814, powers Gulfstream’s smaller-class G500, which has an operational range of 5,000 nm.

Pratt & Whitney Military Engines President Matthew Bromberg says the engine represents “the state-of-the-art eco-design technology, developed and refined with more than 20 years of investment and effort. It is designed to be the easiest engine in its thrust class to access and maintain.”

Meanwhile, UTC Aerospace Systems has been selected to design and build the MQ-25’s landing gear and Fokker of GKN Aerospace will supply the arresting hook.

L3 Technologies will produce the GA-ASI MQ-25’s line-of-sight and beyond-line-of-sight communications systems, used to control the aircraft and pipe back intelligence, surveillance, and reconnaissance (ISR) data.

Rockwell Collins will supply “advanced navigation technologies” and TruNet will provide the ARC-210 networked communications airborne radio.

Despite having never previously fielded a carrier-based aircraft, GA-ASI says it will leverage experience gained through General Atomics Electromagnetic Systems’ development of the Electromagnetic Aircraft Launch System and Advanced Arresting Gear for the Navy’s new Ford-class aircraft carrier.

The company says its MQ-25 aircraft “exceeds” all the requirements laid out by the Navy. That includes carrier suitability and the ability to offload 15,000 lb. of fuel while
flying 500 nm from the aircraft carrier. GA-ASI says this type of performance allows one MQ-25 to provide enough fuel for two F-35Cs to operate 1,000 nm from the carrier. The aircraft also must carry a sensor ball for “light” ISR and have enough power and cooling margins for a potential maritime surveillance radar in the future.

The initial engineering and manufacturing development contract being awarded later this year delivers four test aircraft. GA-ASI likely already has a prototype in development.

The winner of the competition can expect orders of up to 72 aircraft to take over tanking duties from the manned Boeing F/A-18E/F Super Hornet.