

Navy Nuclear Reactor Chief: Industrial Base Healthy, but Sustainment Requires High Energy

WASHINGTON – The Navy’s nuclear propulsion industrial base is meeting the needs of the Navy, but it requires a lot of attention to sustain it to ensure its availability.

“The [nuclear industrial] base is small,” Adm. James F. Caldwell, director, Navy Nuclear Propulsion Program, said Oct. 2 at the Center for Strategic and International Studies, a Washington think tank. “The base is healthy and capable of supporting our Navy nuclear propulsion needs. It’s sustainable through the program of record but it takes a lot of energy to sustain that.”

Caldwell noted that the nuclear vendors, particularly the principal vendors, share the culture of the Navy nuclear propulsion program.

“What matters the most to the Navy nuclear propulsion program is a stable 30-year shipbuilding plan and a stable budget,” he said. “These are the things that stimulate our commercial vendors to support us. If they know that they’re going to have the business, they will invest their facilities and stay the course with us.”

Caldwell noted that “in the 1990s, when the force structure went down, it resulted in our major suppliers operating significantly below capacity. We were worried that the demise of the nuclear industrial base would result in the loss of the last critical skills that we needed. Since then we focused on right-sizing the industrial base to sustain the critical skills and facilities that we need, and the optimal words were

low-rate production, consolidation and down-sizing as appropriate to sustain the skills that we need.”

He also said that “since the 1970s, the Navy nuclear propulsion program has been the sole source that has been driving [the delivery of] new reactors. We’ve done so through first-tier suppliers who don’t specifically rely on commercial business for their business. We have commissioned some 99 vessels since 1979.

“Today, our industrial base is made up of hundreds of vendors of various sizes, but we’re focused mostly on about 28 principal vendors,” he said. “Many of these have been with us for 40 or 50 years and some going on even 60 years. The portion of Navy work for these vendors ranges from 15 percent to 95 percent, some even a little more; the average is around 60 percent. Many of them are seeking opportunities to grow their business in the commercial sector.”

Caldwell regards the nuclear industrial base in three levels: reactor plant heavy components; flow components such as valves and pumps; and reactor instrumentation.

He said the Navy is down to one vendor for reactor plant heavy components, for which the Navy’s requirements are very stringent.

“In the flow control [components], there’s some degree of competition, but the barriers for entry are high,” he said. “It does take many years to develop vendors to be able to develop the equipment. Probably the most competition is in reactor instrumentation and control. A lot of our vendors have other government business. In this area we have structured our approach to maintain a level of competition while also preserving some redundancy in the vendor base.”