

Loss of industrial suppliers from the naval nuclear program

As a result of the growth in demand for civilian electric utility reactors and the decline in and uncertain future requirements for naval reactors, many suppliers have turned exclusively to commercial work. Figure 4 shows the loss of naval nuclear suppliers to civilian work. Figure 5 shows the decline in requirements for naval nuclear reactor plants.

Naval nuclear work is very demanding on a supplier's engineering and quality control capabilities. It must be performed under close scrutiny to ensure the reactor will operate reliably and safely under combat conditions. Naval reactors must be designed to withstand combat shock, to continue operations following a partial casualty, to be compact to fit in a warship hull and must be capable of being maintained by ship's force while underway. Obviously, losing propulsion power of a warship in combat could cause loss of the ship.

Once a supplier has left the naval reactor plant business, the task of rebuilding the specialized production skills, quality control, and engineering groups to meet naval warship requirements is similar in scope to starting over again.

SHIFT OF VENDORS FROM NAVAL NUCLEAR REACTOR WORK TO CIVILIAN REACTOR WORK

Typical components	Number of suppliers for naval nuclear plant components		Naval suppliers and former naval suppliers engaged in civilian nuclear plant component work
	1963	1967	
[Security information deleted]	5	2	4
	5	2	4
	5	2	4
	5	1	4
	5	1	3
	5	1	1
	2	1	2
	4	3	3
	5	3	2
	3	2	3
	5	2	3
	5	2	2
	4	1	2
	3	2	2

NUMBER OF SUBMARINES AND SURFACE WARSHIPS AUTHORIZED BY FISCAL YEAR

	Fiscal year												
	Prior to 1957	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Submarines.....	9	6	7	11	4	11	13	14	12	7	6	5	3
CVAN.....	0	0	1	0	0	0	0	0	0	0	0	1	0
CGN/DLGN.....	0	1	0	1	0	0	1	0	0	0	0	1	12
Number of reactors.....	10	8	15	13	4	11	15	14	12	7	6	9	7

¹ Authorized by Congress, not released by DOD.

Although it takes years to develop a company's capability to perform to the standards required for naval nuclear application this capability can be dissipated in a short time if key groups of qualified, experienced technical and production personnel are disbanded. Because of the exacting nature of naval nuclear work and the different technology, most suppliers perform naval nuclear work apart from their commercial work and assign only specially qualified personnel to the naval work. Thus when naval nuclear orders decline, the production, quality control, and engineering personnel are quickly absorbed by other departments or companies. It is virtually impossible to reassemble the same people once they have disbanded.

Conclusion

To retain sufficient naval nuclear industrial capacity to build the reactor plants for the nuclear submarines and surface warships needed by the Navy, it is important that a firm shipbuilding program be decided upon as soon as possible so that long term commitments can be obtained from suppliers. Special